

Role of early-career pharmaceutical groups in global health

FIP Young Pharmacists Group

August 2021



FIP Development Goals



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International Pharmaceutical Federation (FIP)

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Foreword

Welcome to the “Role of early-career pharmaceutical groups in global health” report.

The world is experiencing its biggest generation of youth in history, with more than half of the world's population under the age of 30. With such a large population, it is critical to engage and work with young people to protect their rights and to assist them in progressing and actively participating in the policy development of organisations. It is evident that youth must be engaged and stimulated in order to become a dynamic group that exceeds expectations. This is what the International Pharmaceutical Federation (FIP) is doing. We support the actions of early-career pharmaceutical groups and integrate early career pharmacists and pharmaceutical scientists in our official working groups and committees. The voice of the future is important for FIP.

Young pharmacists and pharmaceutical scientists already have and will continue to have a significant role in defining the profession for the next decades. The FIP Young Pharmacists Group aims to promote the youth section of the profession and to boost their capacities. Its network of members is bringing closer groups of early-career professionals, as this report shows us.

This report is only a start, but it reveals the impact that young professionals have on society, with a focus on global health. We hope this report will inspire individuals to create their own early-career groups in their countries or regions, and we also hope that other groups learn from this report and are influenced to develop their initiatives and share their outcomes and knowledge.

Achieving global health is not an easy task, and it needs the efforts of everyone. It is gratifying to realise that young pharmacists and pharmaceutical scientists are fighting for it and for a better future.

Happy International Youth Day!

Long live pharmacy! Long live FIP!



A stylized, handwritten signature in blue ink, consisting of several loops and a long horizontal stroke at the bottom.

Dominique Jordan
FIP President

Testimony

As the first of its kind, this report is an important piece of work that provides insight into the efforts of early-career pharmacists (ECPs) and early-career pharmaceutical groups (ECPGs) in addressing health issues in their communities as well as global health challenges.

Highlighting the inclusion of young pharmacists and pharmaceutical scientists in the work of addressing global health problems serves two important purposes: it inspires young people to be engaged and take ownership of their future and assures that established organisations always look to the future while working to solve today's pressing health issues. That is the essence of this work by FIP YPG and they are to be congratulated for making this effort to be heard and taken seriously as providers of health care. Not content with merely describing the present state of affairs, this report also sets a path forward for elevating the contributions of all ECPs and ECPGs through networking and sharing of experiences and expertise to learn from each other and grow into expert professionals.

It is an important step forward for FIP YPG to further engage ECPs and ECPGs in addressing the many health challenges that exist for which pharmacists can and should provide valuable healthcare services. In so doing, it furthers the cause of promoting the contributions that pharmacy can make to improving health and wellbeing.



Prof. Ralph J Altiere

FIPed Executive
Committee Chair

Congratulations to all involved in delivering this most important report: "Role of early-career pharmaceutical groups in global health. "

FIP has fostered early-career pharmacists through the FIP Young Pharmacists Group for the past 20 years. This landmark report highlights the potential of this group and the important role of groups that represent them. The future in our profession for pharmaceutical educators, scientists and practitioners will not be fashioned by a diktat from those in senior ranks today, but rather by those young pharmacists brave enough to identify where they can make a difference and where their skills can be best leveraged to redefine pharmaceutical care to deliver best possible health outcomes. Advocacy and policy making informed by early-career pharmacists will help support that future.

This report clearly validates the engagement by FIP with early-career pharmacists. I commend this report to all pharmacists and pharmaceutical groups and encourage all to embrace the opportunity that resides within our young pharmacists.

Again, congratulations to all involved!



Paul Sinclair

FIP Board of
Pharmaceutical
Practice Chair

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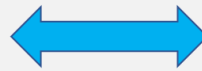
Executive summary

Background and introduction

Global health and pharmacy transformation



The 17 UN SDGs are a blueprint to achieve a better and sustainable future for all.



The FIP Development Goals (DGs) are a key resource for transforming the pharmacy profession nationally, regionally and globally.

FIP's global priorities include "Non-communicable diseases", "Prevention" and "Safety". This is to support the Astana commitment and pharmacy transformation.

Students and early-career professionals are the future of the profession. Meaningful youth engagement can contribute to the achievement of FIP DGs and UN SDGs.



How can they be involved?

-  Individually
-  Through early-career pharmaceutical groups (ECPGs)

There is not much evidence related to global health on:

- 1 The involvement of early-career professionals individually;
- 2 The role of ECPGs; or
- 3 The needs of early career professionals for ECPGs



Therefore, the FIP YPG conducted a global survey on the involvement of individuals and the role of ECPGs in global health.

What we found so far?



We received responses from 48 countries across six regions



Expectation and involvement of early career pharmaceutical groups in health emergency responses, emergency preparedness and COVID 19 responses

- ECPGs develop advocacy planning and awareness sessions related to emergency preparedness responses.
- The involvement of ECPGs in emergency preparedness is mainly through public awareness and communication.
- Respondents highlighted more expectation for the involvement of ECPGs on emergency preparedness.
- Respondents expected ECPGs to be involved more on infection prevention and control for COVID-19.

Early career pharmaceutical groups initiatives, activities and engagement with stakeholders



- Divergences between individuals' expectations and ECPGs' realities highlighted gaps to promote and develop programmes related to grants opportunities and leadership development.
- The most commonly engaged stakeholders are universities, and the least commonly engaged are caregivers and patient organisations.



Involvement of early career pharmaceutical groups in SDGs, tackling urgent global health challenges and primary health care

- ECPGs develop activities mapped to SDGs, with the majority of them focusing on SDG 3 "Good health and wellbeing".
- General access to medicines is a global health challenge that the majority of ECPGs are currently addressing.
- The majority of ECPGs do not have initiatives related to primary healthcare.
- Existing activities are mainly related to congresses and webinars.

Youth initiatives, expectations and involvement in policy and regulation, general services, specific services, condition-specific services



- **Policy and regulation:** Individuals and organisations have similar involvement, where involvement in drug formulary development, prevention programmes and safety programmes are the top three selected categories.
- **General services:** The majority of individual involvement was towards medicines dispensing with limited involvement for patient-care services, such as pharmacist-led clinics. Similarly, most ECPGs' initiatives were related to patient counselling and public health campaign.
- **Specific services:** Antimicrobial stewardship, health screening and smoking cessation are the top three selected categories of individual involvement, similarly to ECPGs' initiatives. ECPGs reported having initiatives in all specific services, with vaccination and antimicrobial stewardship as the top two most common initiatives.
- **Condition services:** The top three most common individual involvement areas were diabetes, hypertension and asthma. Asthma and pain management are topics that ECPGs are not currently developing activities on, although individuals expect ECPGs to do so.

Case study and examples of the role of ECPG in global health in Nigeria, Lebanon, Portugal, Indonesia, Malaysia on emergency, advocacy & COVID-19 response



What can we do next?

RESHAPE the future work of the group



IMPROVE engagement with national & regional ECPGs to be involved in a global network of ECPGs



PROMOTE collaborative initiatives that contribute to the generation of evidence



ALIGN member expectations to ECPG-led initiatives



COLLABORATE to establish a national/regional ECPG & build relationships with professional organisations - roadmap for national/regional ECPGs



SUPPORT the development of new programmes according to the needs of individuals and organisations



PROMOTE national/regional ECPGs and ECPG-led initiatives



List of acronyms or abbreviations

APJF	: Associação Portuguesa de Jovens Farmacêuticos (Portuguese Association of Young Pharmacists)
AYPG	: Asian Young Pharmacists Group
BARS	: Behaviourally Anchored Rating Scales
BNPB	: National Agency for Disaster Management (Indonesia)
BPBD	: Regional Disaster Management Agency (Indonesia)
CDC	: Centers for disease control and prevention
COPD	: Chronic Obstructive Pulmonary Disease
ECPG	: Early Career Pharmaceutical Groups
ETO	: Earned time off
FAP	: Fédération Algérienne de Pharmacie (Algerian Federation of Pharmacy)
FRPs	: Fully registered pharmacists
GPO	: Global Pharmaceutical Observatory
IAI	: Indonesian Pharmacist Association
IYPG	: Indonesian Young Pharmacist Group
LPSA	: Lebanese Pharmacy Students' Association
MoPH	: Ministry of Public Health
MPS PPC	: Malaysian Pharmacists Society - Public Pharmacists Chapter
MPS YPC	: Malaysian Pharmacists Society - Young Pharmacists Chapter
NGO	: Non-governmental organisation
PRPs	: Provisionally registered pharmacists
PSA	: Pharmaceutical Society of Australia
PSD	: Public service department
PSN-YPG	: Pharmaceutical Society of Nigeria – Young Pharmacists' Group
PSP	: Pharmaceutical Services Program
UHC	: Universal Health Coverage
WHO	: World Health Organization
YPG	: Young Pharmacists Group

Chapter 1. Global health challenges and opportunities

Global health is defined as “an area for study, research, and practice that places a priority on improving health and achieving health equity for all people worldwide”.¹ As part of the healthcare workforce, pharmacists and pharmaceutical scientists play an important role in global health activities. The International Pharmaceutical Federation (FIP) is a global body representing over four million pharmacists and pharmaceutical scientists.² FIP envisions “a world where everyone benefits from access to safe, effective, quality and affordable medicines and health technologies, as well as from pharmaceutical care services provided by pharmacists, in collaboration with other healthcare professionals”. The mission of FIP is to support global health by enabling the advancement of pharmaceutical practice, science and education. In order to achieve this, six strategic outcomes were created:³

1. Everyone has access to the medicines they need.
2. Everyone has access to the health and medicines-related information they need.
3. Everyone benefits from innovations in medicines, health technologies and services.
4. Pharmacists ensure the responsible and quality use of medicines.
5. Work collaboratively to ensure comprehensive and integrated healthcare outcomes for patients.
6. FIP is a cost-effective, unified, vibrant and growing organisation that meets the needs and supports the work of its members.

Chapter 1 will explore some concepts related to global health agendas, including sustainable development goals, the primary health care agenda, health emergency activities and non-communicable diseases.

The report will provide information regarding the role of young pharmacists and pharmaceutical scientists in tackling these challenges, either individually or through early-career groups, and it also aims to present the difference youth is making in global health, since until now there have been no compiled data, or the data are insufficient.

1.1 Sustainable Development Goals — 2030 agenda

In 2015, the United Nations (UN) adopted 17 Sustainable Development Goals (SDGs) to be achieved by 2030.⁴ These goals aim to promote prosperity while also protecting the planet (see Figure 1).



Figure 1. Sustainable Development Goals (SDGs)

In 2020, the UN marked its 75th anniversary, and the UN75 initiative was created. With the UN75 initiative, a global conversation was carried out to encourage people to share their hopes and fears and how the global challenges can be addressed. To join the UN75 conversation, the UN provides the toolkit for everyone interested in getting the conversation started. There are several ways to join the conversation. This could range from a social media

campaign to a simple one-minute survey or a more formal focus group discussion. More than one million respondents shared their voices in the UN75 survey. This survey revealed the importance of healthcare in people's priorities for a better life. "Better access to healthcare" and "Risks related to health (e.g., pandemics, greater resistance to antibiotics)" were among the top responses.⁵ The role of pharmacists and pharmaceutical scientists in these priorities has never been more significant.

Seven megatrends that formed part of the conversation included: the impact of digital technologies, a new era of conflict and violence, bridging the divide of inequality, winning the race against climate change, shifting demographics, investing in health for an equitable future and closing the gap of gender inequality.⁶ Pharmacists and pharmaceutical scientists play an essential role in every megatrend by being able to leverage digital technologies, being part of humanitarian aid organisations or health facilities in emergencies, conflicts and disease outbreaks, optimising disease management and promoting patient safety through healthcare literacy, adopting processes that minimise the environmental impact of pharmaceuticals and pharmacy practice in daily routines to manage climate change, promoting adherence to treatments to achieve optimal healthcare outcomes, being the first port of call in community pharmacies, especially in developing regions, and also by promoting and practising gender equality in the provision of patient care.

1.2 The decade of action

In September 2019, the UN Secretary General called on all sectors to mobilise for a decade of action in order to speed up and scale up the progress towards achieving the 2030 agenda.⁷ As a result, the WHO released a list of 13 urgent global health challenges that must be prioritised in the next 10 years, the "Decade of action" (see Figure 2).⁸

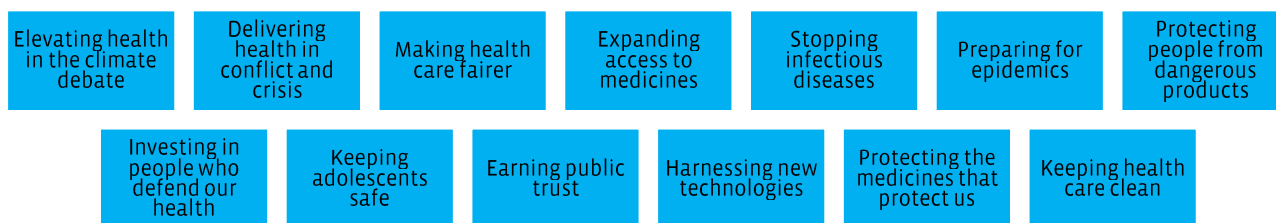


Figure 2. Thirteen urgent global health challenges

While none of the 13 challenges is more important than the other, two focused on infectious diseases, showing a recognition of the threat they pose. Shortly after, the world experienced the COVID-19 pandemic, which has had a significant impact on all 17 global goals and made the 13 urgent global health challenges even more critical.

The 9th Global Conference on Health Promotion, held in Shanghai, China, in 2016, was an extraordinary milestone because it positioned health promotion within the 2030 agenda. The Shanghai Declaration, signed at this event, recognises health and well-being as essential to achieving sustainable development. It reaffirms health as a universal right, an essential resource for everyday living, a shared social goal and a political priority for all countries.⁹

1.3 Preparing for epidemics: health emergency activities

One of the 13 urgent global health challenges is "preparing for epidemics". Every year, the world spends more money responding to natural disasters, disease outbreaks and other health emergencies than preparing for and preventing them.⁸ The WHO tracked 1,483 epidemic events in 172 countries from 2011 to 2018. The world is at acute risk of destructive regional or global disease epidemics or pandemics that cause life loss and disrupt the economy.¹⁰ A pandemic of a new, extremely contagious, airborne virus — most likely a variant of influenza — is unavoidable. It is not a question of if, but when another pandemic will strike, and when it does it will spread quickly, posing a threat to millions of people. In addition, mosquito-borne diseases such as dengue fever, malaria, Zika, chikungunya and yellow fever are rising as mosquito populations expand due to climate change.⁸

It is evident that many countries worldwide were not prepared to face the COVID-19 pandemic in 2020. In January 2020, when the Director-General of WHO declared the novel coronavirus outbreak a public health emergency of

international concern, several measures were taken. These included establishing expert meetings and raising initiatives, for example, the creation of the OpenWHO platform.²¹ This online platform provides free digital courses to improve the individual, organisational and national response to health emergencies.²² The socioeconomic impact of COVID-19 will have long-lasting effects. It has already and will continue to affect national and international economies. Putting an end to the spread of the virus is a challenge all individuals have to be involved in.

National preparedness programmes may address threats such as bioterrorism, chemical and radiological threats, natural disasters, pandemics, infectious diseases, workforce violence and mass casualty. To tackle these threats, pharmacists and pharmaceutical scientists can intervene directly in the field by distributing food and water, having mobile health clinics or implementing other measures such as awareness sessions and advocacy. Also, in addition to developing, supporting, training and being part of emergency response teams, pharmacists and pharmaceutical scientists play key roles in developing policy or good practices in emergency preparedness.

Pharmacists and pharmaceutical scientists are also part of key players in responding to the pandemic.¹³ For example, the proximity of community pharmacists to the population allowed the transmission of accurate information regarding the pandemic to individuals, especially in rural areas. In this way pharmacists have a large role to play in combatting “fake news”. In addition to patient education, the pharmacy workforce also ensured that medical supplies were distributed directly to the houses of patients with chronic conditions (including cancer patients) to reduce visits to the pharmacy and to protect them from unnecessary risk exposure. In hospitals, the pharmacy workforce ensures critical medication supply, evaluates medication options in COVID-19 patients, and monitors and adjusts doses to prevent adverse effects. Furthermore, hospital pharmacists work collaboratively with other healthcare professionals to ensure the best care possible for COVID-19 patients. Pharmacists and pharmaceutical scientists in industry and academia are working to develop and improve vaccines and drug formulations to fight the existing and rising strains of the virus. Furthermore, the pharmacy workforce’s initiation and administration of vaccines increase vaccination rates and are essential in fighting this disease.¹⁴

As a global federation, FIP has stood up to play a significant role for the pharmacy profession at this time of global health crises. FIP took the lead in supporting and enabling the profession's reaction to the COVID-19 in many ways. The FIP gathers global expertise, fosters international solidarity among the pharmacy profession, and ultimately supports prompt action in countries. In addition, some activities had been developed, such as providing evidence-based professional and technical guidance, providing support to members and profession, collating quality data to ensure initiatives meet the needs of the professions, taking a leadership role in advocating the contribution, safety and appropriate recognition of pharmacists, pharmaceutical scientists and pharmacy educators.¹⁵

1.4 The non-communicable diseases epidemic

While the world’s attention has been drawn to the rapid and devastating nature of infectious disease epidemics, the burden of non-communicable diseases (NCDs), including cardiovascular diseases, which account for most deaths, followed by cancer, respiratory diseases, and diabetes, continues to grow and now accounts for 71% of all deaths globally, with 85% of premature deaths (between ages 30 and 69 years) occurring in low- and middle-income countries. Modifiable behavioural risk factors like tobacco use, physical inactivity, harmful use of alcohol and unhealthy diets have been identified as the primary drivers for NCDs¹⁶ but despite intervention efforts, progress towards the 2030 SDG 3.4 target of a one-third reduction in premature deaths from NCDs has dwindled since 2010.¹⁷

The COVID-19 pandemic has interacted negatively with the NCD epidemic resulting in disruption of services and underinvestment in the prevention, early diagnosis, screening, treatment and rehabilitation for NCDs, which would likely result in a long-term upsurge in deaths from NCDs. Also, people living with NCDs have been more vulnerable to becoming severely ill or dying from COVID-19. This was evident in Italy, where 68% and 31% of all COVID-19 hospital deaths had hypertension and diabetes, respectively, and in Spain, where 43% of all severe COVID-19 cases had existing cardiovascular diseases.¹⁷

Pharmacists are crucial to reducing the incidence and burden of NCDs. Evidence is strong concerning the value of pharmacists’ contribution to NCD prevention and management and the quality use of medicines. Building on the key roles pharmacists already play as primary healthcare professionals in the community, pharmacists can

provide focused interventions, specialised counselling and care coordination improving patient engagement to achieve better outcomes in the global fight against NCDs.¹⁸

1.5 Primary health care agenda: Astana Declaration

The Global Conference on Primary Health Care in October 2018 endorsed a new declaration emphasising the critical role of primary health care, called the Astana Declaration. The Astana Declaration envisions “Primary health care and health services that are high quality, safe, comprehensive, integrated, accessible, available and affordable for everyone and everywhere, provided with compassion, respect and dignity by health professionals who are well-trained, skilled, motivated and committed”.¹⁹

With pharmacists and pharmaceutical scientists being integral to the delivery of quality primary health care, FIP is leading pharmacy's commitment to the Astana Declaration. FIP is working with its regional partners and members worldwide to consolidate pharmacy's position in delivering the primary health care agenda through a series of regional conferences, beginning with the Eastern Mediterranean region.²⁰ In Amman, Jordan, in April 2019, around 1,200 pharmacy leaders and participants from more than 30 countries gathered to sign the first pharmacy commitment to primary health care as FIP's collective response to the Astana Declaration, the “Amman Commitment to Action on Primary Health Care”, to transform pharmacy for better primary health care.²¹ In October 2019, in Ankara, Turkey, a second regional conference was held for the European region focusing on “Delivering primary health care: pharmacists taking the next leap forward”.²² The FIP primary health care strategy is that pharmacy can contribute to universal health coverage (UHC) through primary health care in all sectors through the non communicable diseases, prevention and safety agendas (see Figure 3).

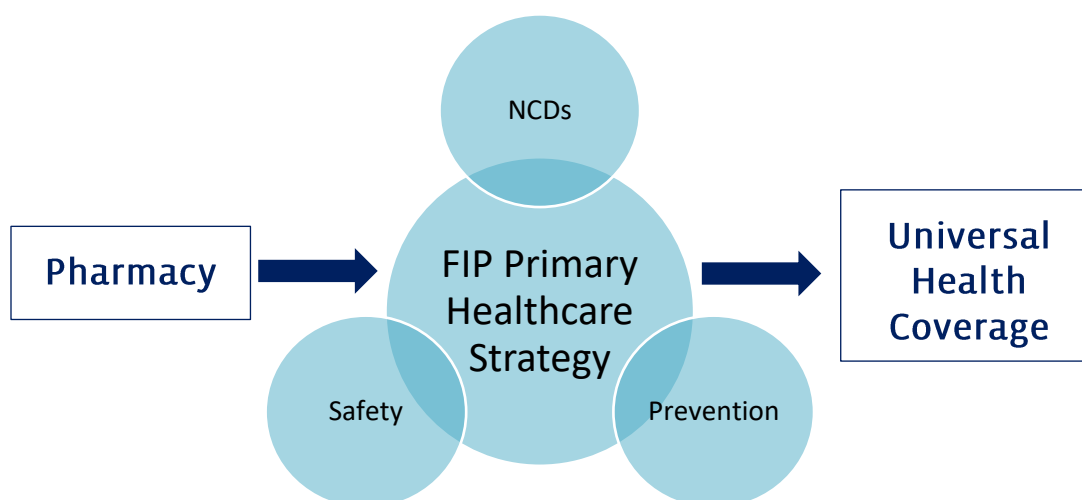


Figure 3. FIP strategy for pharmacy in primary health care to deliver universal health coverage

1.6 FIP engagement in global health

As a global federation, FIP has stood up to play a significant role for the pharmacy profession over the years and particularly at this time of global health crises. FIP took the lead in supporting and enabling the profession's reaction to COVID-19 in many ways. FIP gathers global expertise, fosters international solidarity among the pharmacy profession and, ultimately, supports prompt action in countries. In addition, some activities had been developed, such as providing evidence-based professional and technical guidance, providing support to members and profession, collating quality data to ensure initiatives meet the needs of the professions, taking a leadership role in advocating for the contribution, safety and appropriate recognition of pharmacists, pharmaceutical scientists, and pharmacy educators (see Figure 4).¹⁵

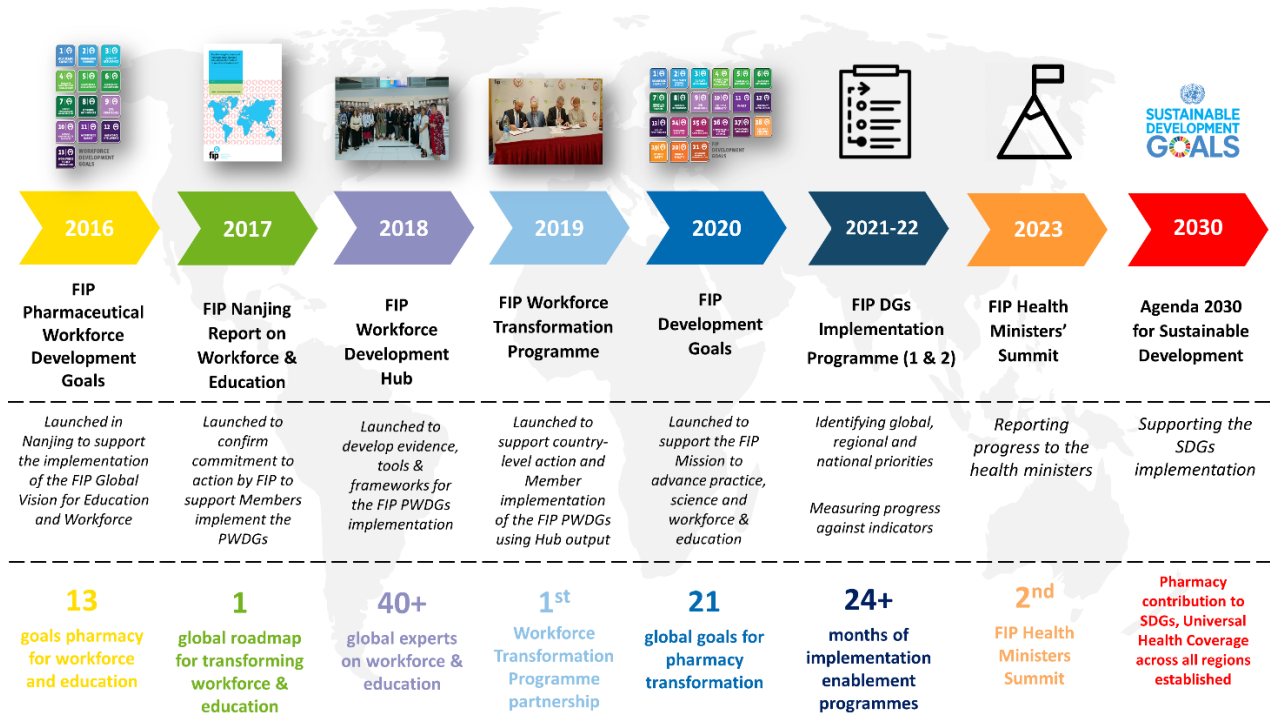


Figure 4. FIP engagement in global health

In September 2020, FIP launched its FIP Development Goals (DGs) to support its mission to advance practice, science and workforce transformation.²³ The DGs built on the previously validated Pharmaceutical Workforce Development Goals (PWDGs) that were launched in Nanjing, China, in 2016. The PWDGs informed the FIP vision for education and workforce development to 2018. The DGs are a key resource for transforming the pharmacy profession over the next decade globally, regionally and nationally. These DGs are set to transform pharmacy and pharmaceutical science in alignment with the UN SDGs. Countries can use these DGs as a framework for needs assessments and prioritisation (see Figure 5).



Figure 5. FIP Development Goals

Young pharmacists and pharmaceutical scientists are professionals who are able to develop the same work as older professionals. Nevertheless, having the future ahead, they have a different motivation and perspective of what needs to change. Chapter 2 discusses the role of youth in global health, in particular the role of young pharmacists and pharmaceutical scientists.

Chapter 2. Youth and global health

2.1 Youth: future of the profession. What can we do?

“Young people of today are the leaders of tomorrow”²⁴

The world currently has the largest generation of youth in its history, with more than half of the world's population under the age of 30.²⁵ How young people handle their adjustment to adulthood is vital in shaping how they will respond to the changes and challenges in global health. With this growing number, it is imperative to engage and work with youth to support them with their rights and to help them progress and participate actively in the achievement of SDGs.²⁶

The UN established its Youth Strategy, “Youth 2030”, in 2018.²⁶ Other organisations, including the WHO, have endorsed the importance of engaging young people to achieve SDGs and to improve health care outcomes.²⁷ However, this endorsement has to be followed by commitments and action.²⁴ The transformative potential of youth can only be achieved through participatory leadership and by establishing the requisite relationships and tools to allow young people to participate completely as leaders. Meaningful youth engagement needs mechanism and the normalisation of young people's involvement at every table as equal partners and experts.^{24,28}

“Youth workers in the health and social care sector must be involved through mechanisms of meaningful youth engagement including programme planning and policymaking”²⁸

If given the opportunity, young health and care workers can make a significant impact and valuable contributions. Young professionals are frontline healthcare workers and global health champions who play a pivotal role in addressing global health challenges. Early interaction with health systems and policymaking is important to enable them to get experience and develop themselves to tackle health-related challenges. Equipping young people with professional expertise, supporting them, and implementing inclusive capacity development opportunities will increase the number of young people participating and should guide all organisations working in the global health space.²⁴

Youth-led groups are becoming more visible in global health, and they are advocating more meaningful engagement of young people in global agendas. The Global Health Workforce Network (GHWN) Youth Hub is an example of youth involvement in policy. The Youth Hub is an intersectoral inter-professional community of practice hosted by the GHWN and the Health Workforce Department at the WHO. The Youth Hub aims to engage youth, work for youth and be driven by youth to promote human resources for national, regional and global health agendas. Its collaboration with the WHO brings youth strength and voice to the efforts to deliver UHC and achieve the SDGs.²⁹

2.2 FIP YPG — global youth platform to support global health

The FIP YPG is a network of young pharmacists and pharmaceutical scientists under 35 years of age or who have graduated less than five years ago from their first degree in pharmacy or pharmaceutical science (irrespective of Bachelors, Masters, PhD, or PharmD degree conferral).³⁰ The FIP YPG mission is to promote the goals of FIP by encouraging the young members of the federation to participate in FIP projects and activities. FIP YPG aims to develop individuals who can act as agents of positive change at local, national, and international levels, both in the profession and in society. FIP YPG actively drives positive change in healthcare. Some examples include the implementation of a leadership development workshop for young pharmacists and pharmaceutical scientists, creation of a professional career development toolkit for early-career pharmacists and pharmaceutical scientists to help them build their careers and develop expertise,³¹ hosting multiple digital events for professional development social media campaigns for health-related days/weeks and publication of the 2019 FIP mHealth report³² which discusses how pharmacists and pharmaceutical scientists can utilise mHealth to improve patient care.³³

“For optimism about our future, we need to look to our young people. The overwhelming majority of us believe global cooperation is more vital than ever.”³⁴

The quote above is from the UN75 report where the UN called for youth and non-governmental organisations (NGOs) to join the conversation (see Section 1.1). The International Pharmaceutical Students Federation (IPSF) and the FIP YPG utilised this opportunity to advocate the pharmacy profession as youth organisations by conducting a campaign to introduce and prioritise the UN megatrends and raise awareness on the role of pharmacy professions in tackling prioritised megatrends topics.³⁵

The FIP YPG runs a mentorship programme to provide mentorship to young pharmacists and pharmaceutical scientists developing their careers. Mentors on the programme, which lasts nine months, provide general advice, assist in setting goals and assist young pharmacists/pharmaceutical scientists in staying on track with their career development. Further career development support is provided through the publication of the “Career development toolkit for early career pharmacists and pharmaceutical scientists”. This toolkit has been created by the FIP YPG for members with the intention of assisting them to develop sustainable and rewarding careers in all areas of pharmacy and pharmaceutical science.³¹ Other activities of the FIP YPG include the remote volunteering programme, which provides opportunities to young pharmacists/pharmaceutical scientists to learn and develop their skills in global projects within FIP. The FIP YPG also contributes to discussions on trends and innovations that result in published reports to guide groups and individuals, for example, digital health in pharmacy education.³⁶ Further, the group provides a number of scholarships and grants to encourage creativity and innovation.³⁷

The FIP YPG believes an ECPG, or any group for early career pharmacists and pharmaceutical scientists, can bring innovative solutions to improve global health; however, there is limited information describing the roles and contributions of early-career pharmacists and pharmaceutical scientists locally, nationally and internationally. Chapter 3 will describe a survey conducted by the FIP YPG to explore young individuals’ and groups’ perceptions of their responsibilities in global health and the global health-related activities they are carrying out in their region. No matter how big or small the activities may be, all the initiatives are steps to accomplish the SDGs proposed by the United Nations.

Chapter 3. Global survey on the role of early-career pharmaceutical groups in global health

3.1 Aim and purpose of the survey

The global survey aimed to understand the activities related to global health undertaken by individuals and groups of pharmacists and pharmaceutical scientists from different countries. Each country and/or organisation has its own criteria to define groups of pharmacists and pharmaceutical scientists. The FIP YPG comprises pharmacists and pharmaceutical scientists under 35 years of age or those who have graduated less than five years ago with their first degree in pharmacy or pharmaceutical science (irrespective of Bachelors, Masters, PhD, or PharmD degree conferral).³⁰ The illustration of the survey process can be seen in Figure 6. In the survey, four components were explored related to programmes, initiatives, expectations and perceptions and networks to explore the impact of early-career Pharmaceutical Groups (ECPGs) in global health in order to achieve FIP strategic outcome 6: “FIP is a cost-effective, unified, vibrant and growing organisation that meets the needs and supports the work of its members.” This survey is also aligned with several FIP DGs, such as to support early-career training strategy, to provide evidence on leadership development available, to work with others in advancing provision, to provide evidence on the impact of ECPGs, and to provide data on the role of ECPGs in order to support evidence-based policy development.

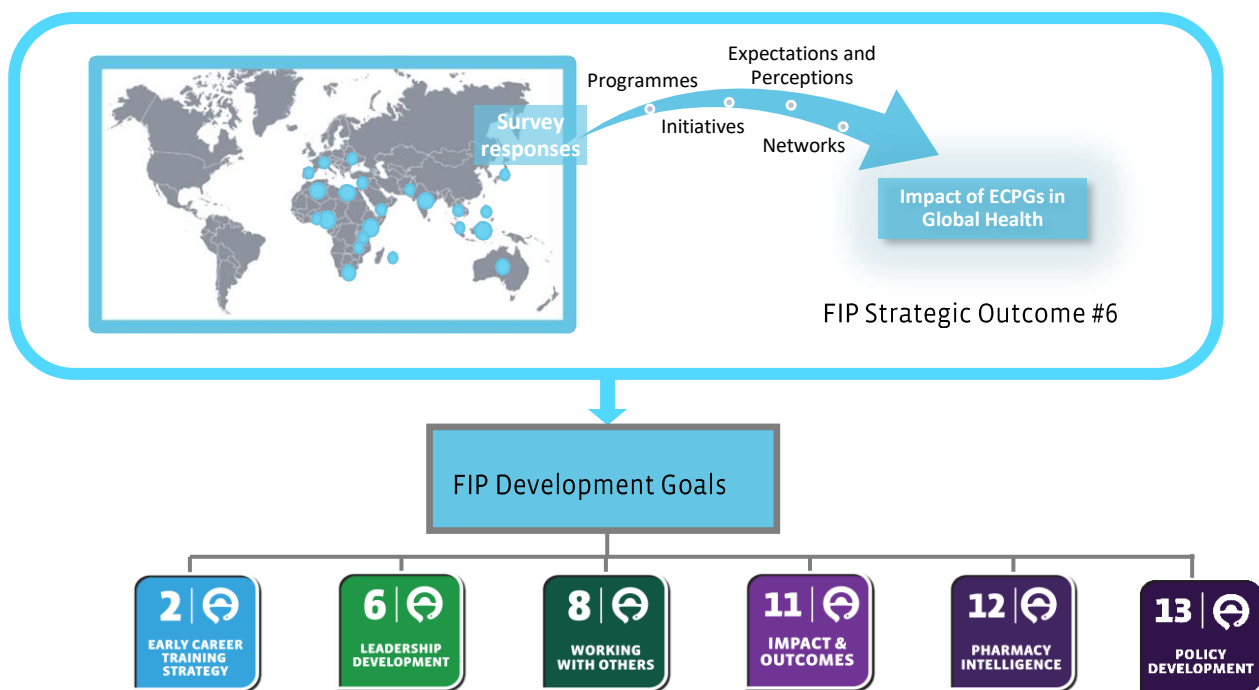


Figure 6. Illustration of the survey process

The survey result, it is hoped, will be able to identify gaps that need to be addressed to foster engagement with the national/regional early-career groups and individuals within the global network. It will also allow the public to understand better the efforts made by these individuals and that ECPGs in different countries will get to know what other ECPGs are doing. This survey also serves as a platform for individuals and ECPGs to share their experiences and learn from the examples and initiatives shared.

3.2 Development of a questionnaire as a data collection tool

Members of the survey project team created a draft questionnaire. The draft was piloted and reviewed by the FIP leadership and FIP YPG members (see “Acknowledgements”). The online survey was administered using QuestionPro, web-based software. The flowchart containing the list of questions included in the questionnaire is set out in Annex 1.

National young pharmacists’ groups, and individual young pharmacists and pharmaceutical scientists were asked a series of questions on the activities they have undertaken in the past, activities currently ongoing and any activities they have planned for the future.

The questionnaire had four main sections:

1. Details of ECPGs (such as name, country, affiliation (or not) to a national pharmacy/pharmaceutical group and establishment date) if present in the country that the individual resided in;
2. The group’s activities and collaboration;
3. Involvement and initiatives led by young pharmacists and scientists, and groups related to global health goals and services; and
4. The group’s initiatives in emergency preparedness.

3.3 Survey distribution

From a member needs assessment conducted in 2019,³⁸ the FIP YPG identified 40 young pharmacists groups or associations from 34 countries worldwide. In this survey, apart from these 40 national/regional ECPGs, the FIP YPG also targeted individuals within the country to explore their needs and views on the role of groups, and themselves as individuals, in global health.

The online questionnaire-based survey was disseminated between July and October 2020 (four months total) to FIP YPG individual members through Mailchimp. Promotion via social media platforms (Facebook, LinkedIn, Twitter, Instagram) was also conducted. A reminder to complete the survey was sent every two weeks. The survey was also shared through FIP YPG’s national/regional ECPGs networks, with which contact was made at the beginning of the survey.

3.4 Data analysis

An analysis of the survey data was conducted for both full and partially completed responses. The data were entered, cleaned, coded and analysed in Microsoft Excel. The quantitative findings were analysed descriptively, whereas the qualitative findings were analysed thematically. The project team developed a survey analysis plan to guide the analysis process. Responses were divided and analysed separately in three categories (see Figure 7). The Group C category will be referred to as “organisation” throughout the report because the individuals represent “organisation” for their responses.

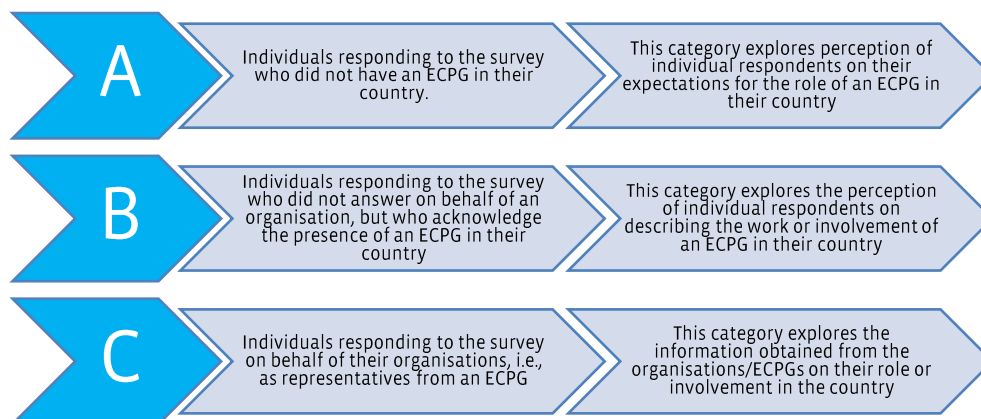


Figure 7. Data analysis categories illustration

The focus of the analysis is to compare and contrast between regions to explore regional priorities and gaps. The results will be presented per category of respondents across the themes indicated in Figure 8. The results will start with a summary of themes followed by a comparison across regions.

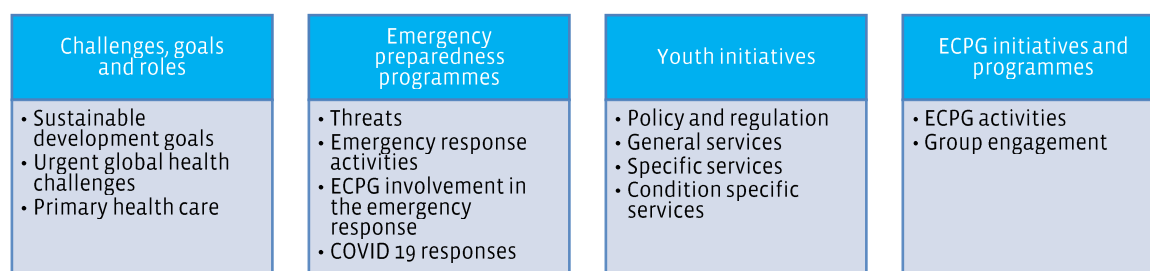


Figure 8. Data findings categories illustration

3.5 Results and discussion

3.5.1 Country and region distribution of respondents

Ninety-three individuals from 48 countries across the six regions of the WHO were included in the survey analysis. The country and region distribution of respondents can be seen in Table 1. Considering the nature of survey distribution (through social media), it may not be possible to calculate response rate because there was no record on how many people were invited to complete the survey. The survey platform, however, recorded that a total of 2,587 people viewed the survey. A completion rate was calculated based on total response and completed responses, resulting in 18.59% completion rate. Looking specifically for group C, only 20 groups responded to the survey. An initial survey that the FIP YPG conducted revealed there were 40 ECPGs, meaning that this survey obtained a 50% response rate of earlier identified ECPGs. From the groups that responded, 35% are independent groups, and 65% depend on an umbrella pharmaceutical organisation (identified with an *). Umbrella pharmaceutical organisation means the early career pharmaceutical groups is a part of their parent organisation, such as national pharmaceutical group in the country.

Table 1. Country and region distribution of respondents

Region	Group A		Group B		Group C	
	Number of respondents (%)	Country list (n)	Number of respondents (%)	Country list (n)	Number of groups (%)	Country list (n)
Africa	12 (30%)	Kenya, Nigeria, Rwanda, South Africa, Tanzania, Uganda (6)	11 (33%)	Ghana, Kenya, Nigeria (3)	9 (45%)	Algeria*, Cameroon, Ghana*, Kenya*, Mauritius*, Nigeria*, South Africa*, Tanzania*, Zimbabwe* (9)
Eastern Mediterranean	6 (15%)	Egypt, Iraq, Jordan, Pakistan, United Arab Emirates (5)	7 (21%)	Lebanon (1)	3 (15%)	Lebanon, Pakistan*, Yemen (3)
Europe	8 (20%)	Albania, Cyprus, Germany, Malta, Russian, United Kingdom (6)	5 (15%)	Croatia, Cyprus, Poland, Portugal, Turkey (5)	2 (10%)	Portugal, Ukraine (2)
Pan-American	8 (20%)	Brazil, Canada, Chile, Guatemala, USA, Venezuela (6)	3 (9%)	Argentina, Brazil, USA (3)	No responses	
South-East Asia	5 (13%)	Bangladesh, India, Nepal, Sri Lanka (4)	No responses		2 (10%)	India*, Indonesia* (2)
Western Pacific	1 (3%)	Malaysia (1)	7 (21%)	Australia, Cambodia, China Taiwan, Malaysia, Philippines, Singapore (6)	4 (20%)	Australia*, Cambodia, Japan, Malaysia* (4)
Total	40 (100%)	28 countries	33 (100%)	18 countries	20 (100%)	20 countries

3.5.2 Challenges, goals and roles

3.5.2.1 Sustainable development goals (SDGs)

General findings

In general, individuals' expectations of the SDG initiatives that ECPGs should be leading in their regions are similar to the SDG initiatives that ECPGs are already leading; these include SDG 3 (Good health and well-being), SDG 4 (Quality education), SDG 9 (Industry, innovation and infrastructure) and SDG 17 (Partnership for the goals). About a quarter of individual respondents expected their ECPGs to lead initiatives on SDG 13 (Climate action); however, only 5% of ECPGs have developed initiatives towards this goal. There were also instances where individuals were not aware of initiatives led by ECPGs in their regions.

Figure 9 shows a summary of SDGs being selected by each group of respondents.

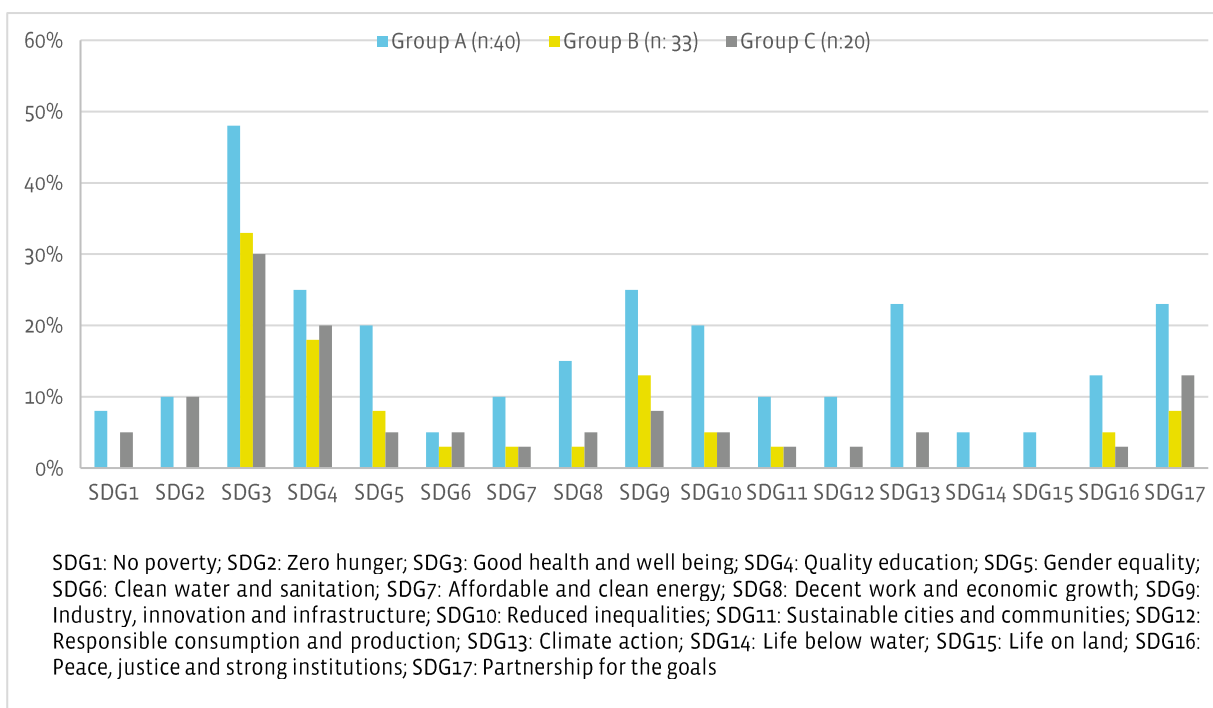


Figure 9. SDGs selected by respondent groups A, B and C

The top three selected SDG initiatives expected to be led by the organisation (Group A) were the same as the top three selected SDG initiatives that members perceived their ECPGs currently led (Group B), namely: SDG3 (Good health and well-being); SDG4 (Quality education); and SDG9 (Industry, innovation and infrastructure). The top three SDG initiatives led by organisations selected by Group C respondents were SDG3 (Good health and well-being), SDG4 (Quality education), and SDG17 (Partnership for the goals).

Of the 17 SDGs, SDG14 (Life below water) and SDG15 (Life on land) were selected by the smallest proportion of survey respondents. This may be because these SDGs are less directly related to the health and pharmaceutical sciences fields.

In general, most SDGs that were expected to be led by organisations (stated by Group A respondents) were in line with most initiatives that have been led by organisations (stated by Group C respondents). These included: SDG3 (Good health and well-being); SDG4 (Quality education); SDG5 (Gender equality); SDG9 (Industry, innovation and infrastructure); SDG10 (Reduced inequalities); SDG13 (Climate action); and SDG17 (Partnership for the goals). Twenty-three per cent of respondents in Group A considered SDG13 (Climate action) as a relevant goal and expected ECPGs to lead initiatives around this goal; however, only 5% of organisations (Group C) have developed initiatives towards this SDG.

It is also interesting to note that Group C respondents have reported initiatives to achieve and promote SDGs that have not been acknowledged by the individuals that have ECPGs in their countries (Group B), such as in SDG1 (No poverty); SDG2 (Zero hunger); SDG12 (Responsible consumption and production) and SDG13 (Climate action).

SDG expectations and initiatives across regions

Figure 10 summarises the SDGs selected by each group of respondents across regions. The colour represents regions, and the bar represents the number of responses obtained within the groups of categories. Across regions, SDG3 (Good health and wellbeing), SDG4 (Quality education) and SDG9 (Industry, innovation and infrastructure), were the most frequently selected goals. SDG14 (Life below water) and SDG15 (Life on land) were selected by respondents from the South-East Asia region. SDG17 (Partnership for health) was selected by respondents from the Africa, Europe, South-East Asia and Western Pacific regions.

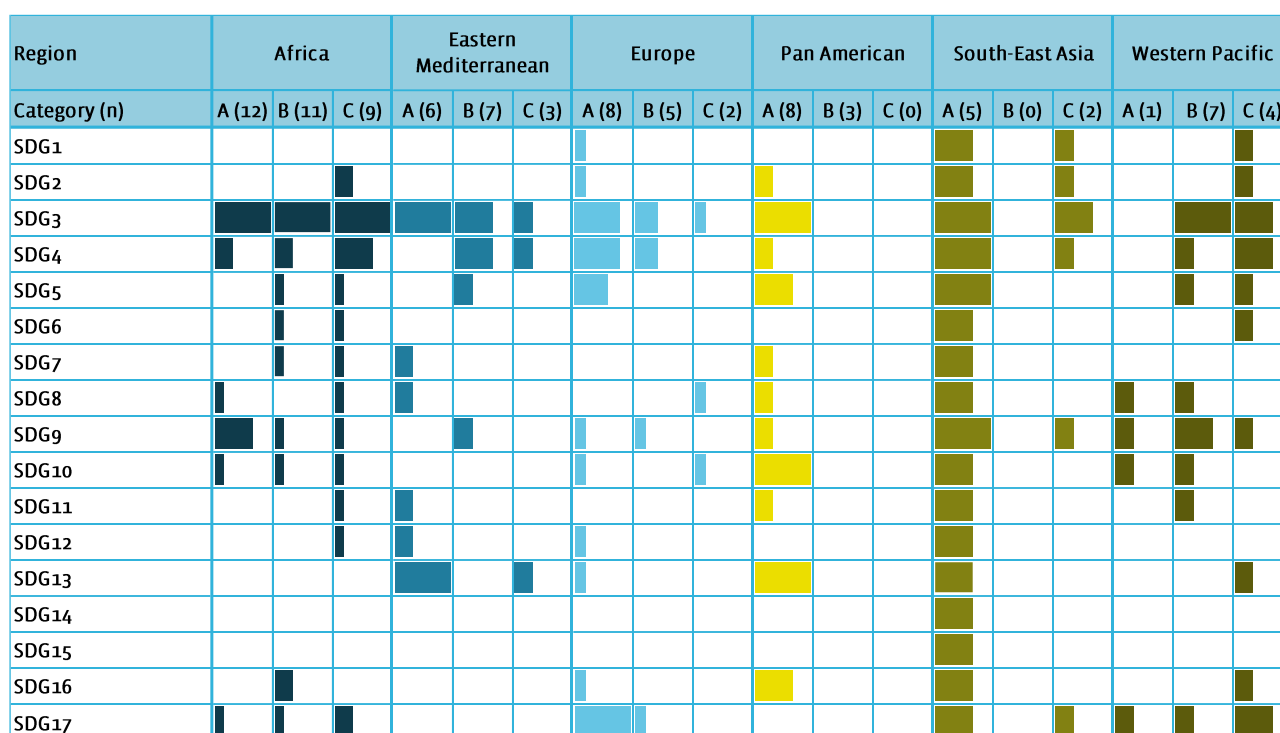


Figure 10. Selected SDGs mapped across regions

Africa

SDG3 (Good health and wellbeing), SDG4 (Quality education), and SDG9 (Industry, innovation and infrastructure) were the top three selected SDGs across each group of respondents. Four out of 12 respondents in Group A from three countries (Kenya, Tanzania and Uganda) indicated that they expected ECPGs to lead initiatives towards SDG9 (Industry, innovation and infrastructure). They also described individual initiatives towards this area, such as involvement in research, capacity building for the pharmaceutical industry, and e-health initiatives to improve public health. However, only one of nine organisations (the ECPG in Nigeria) indicated they developed initiatives towards this SDG. These initiatives included: young researchers and innovation hub related to industry innovation, infrastructure, affordable clean energy, and decent work and economic growth.

Some respondents provided additional information on their initiatives in an open text response. Examples include:

- **SDG2 (Zero hunger):** The ECPG in Nigeria conducted a programme known as “the COVID-19 relief programme”. It was involved in distributing staple foods for residents during the lockdown.

- **SDG3 (Good health and wellbeing):** Most individual initiatives were related to creating awareness of the importance of good health and well-being, advocating UHC and building awareness of the role of pharmacists in NCD prevention and treatment. Respondents also stated active involvement in public health campaigns related to the rational use of medicines and health promotion. Similarly, some initiatives stated by organisations were related to public awareness activities in social media, such as vaccination, health education and hepatitis B campaigns. Another initiative indicated to contribute towards this goal was distributing hand sanitisers to local residents during the COVID-19 pandemic.
- **SDG4 (Quality education):** Examples of individual initiatives related to SDG4 were the promotion of pharmacy as a degree programme and involvement in curriculum improvement through collaboration. Some initiatives by organisations were highlighted in this SDG; for example, the ECPG in Algeria produced a report on evaluating university pharmacy programmes. That ECPG in Zimbabwe described a programme supporting the young pharmacists' exchange programme.
- **SDG5 (Gender equality):** The ECPG in Algeria shared that it promoted SDG5 by ensuring gender equality in the selection of its members or participation in its activities.
- **SDG17 (Partnership for the goals):** The ECPG in Zimbabwe shared its partnership through the Africa Young Pharmacists Partnership Committee.

Eastern Mediterranean

In the Eastern Mediterranean region, individual respondents most frequently expected ECPGs to lead initiatives in SDG3 (Good health and wellbeing) and SDG13 (Climate action). Some initiatives highlighted by individuals related to attending webinars and conferences on the topics, career development (SDG3 and SDG9) and being involved in the pharmacy education committee (SDG4). On the other hand, some organisations have initiatives in SDG3 (Good health and wellbeing), SDG4 (Quality education), SDG13 (Climate action). For example, the ECPG in Pakistan participated actively in a billion-tree programme organised by the government of Pakistan.

Europe

In the Europe region, the top three most frequently selected SDGs that the individuals expected ECPGs to lead were SDG3 (Good health and wellbeing), SDG4 (Quality education) and SDG17 (Partnership for the goals). Examples of individual initiatives were related to education about community health (SDG3) and collaboration with universities (SDG4). Only one ECPG in Europe (the Portuguese Association of Young Pharmacists; APJF) responded to this survey ECPG. The APJF reported that it had led initiatives towards SDG3 (Good health and wellbeing), SDG8 (Decent work and economic growth) and SDG10 (Reduced inequalities). The initiatives that it conducted in SDG3 include organising conferences, webinars, policy events, and podcasts about pharmaceutical and health-related initiatives. It developed a position paper about job conditions for young pharmacists and pharmaceutical scientists, advocating fair salary for young pharmacists and pharmaceutical scientists (SDG8) and also showcased pharmacists and pharmaceutical scientists as key to better access to medicines and healthcare (SDG10).

Pan-American

In the Pan-American region, SDG3 (Good health and wellbeing), SDG10 (Reduced inequalities) and SDG13 (Climate action) were the goals that individuals most expect organisations to work on. They stated their individual initiatives related to these SDGs included: training for pharmacists, guidance on pharmacist's involvement in climate action, sustainable cities and communities, and projects related to medicines access improvement. No ECPG in the Americas responded to this survey.

South-East Asia

In the South-East Asia region, individual respondents expected ECPGs to work towards achieving SDG5 (Gender equality); however, there were no activities conducted by organisations related to this goal. Some respondents provided additional information on their individual initiatives in an open text response. Examples include:

- **SDG1 (No poverty):** The ECPG in Indonesia was involved in providing social services to rural areas in Indonesia to reduce poverty.

- **SDG2 (Zero hunger):** The ECPG in Indonesia supported the movement of the Ministry of Health by being involved in social services and providing education to the population to reduce stunting* rates in Indonesia.
- **SDG3 (Good health and wellbeing):** The ECPG in India distributed sanitary pads to the poor population. The ECPG in Indonesia promoted and conducted a campaign for the prevention of NCDs. The local committee of the Indonesian YPG was also actively involved in providing education to local society on health promotion.
- **SDG9 (Industry, innovation and infrastructure):** Project Dopamine was initiated by the ECPG in India to support SDG9. The project aimed to research, conduct and analyse surveys, and work on models, policies and products which can become potential solutions to reduce the dependency of the Indian pharmaceutical industry on foreign countries.
- **SDG17 (Partnership for the Goals):** The Indonesian YPG highlighted collaboration with other organisations on tobacco control and tobacco harm reduction in order to initiate a smoking cessation therapy programme by pharmacists. The Indonesian YPG also collaborated with other organisations in providing train-the-trainer initiatives to pharmacists to enhance effective communication with other healthcare professionals.

Western Pacific

In the Western Pacific region, SDG9 (Industry, innovation and infrastructure) and SDG17 (Partnership for the goal) were selected by all respondents. In this region, ECPGs have initiatives towards achieving SDG3 (Good health and wellbeing) and SDG4 (Quality education) that individual members (Group B) were aware of.

3.5.2.2 Urgent global health challenges

General findings

Figure 11 summarises the urgent global health challenges selected by each group of respondents.

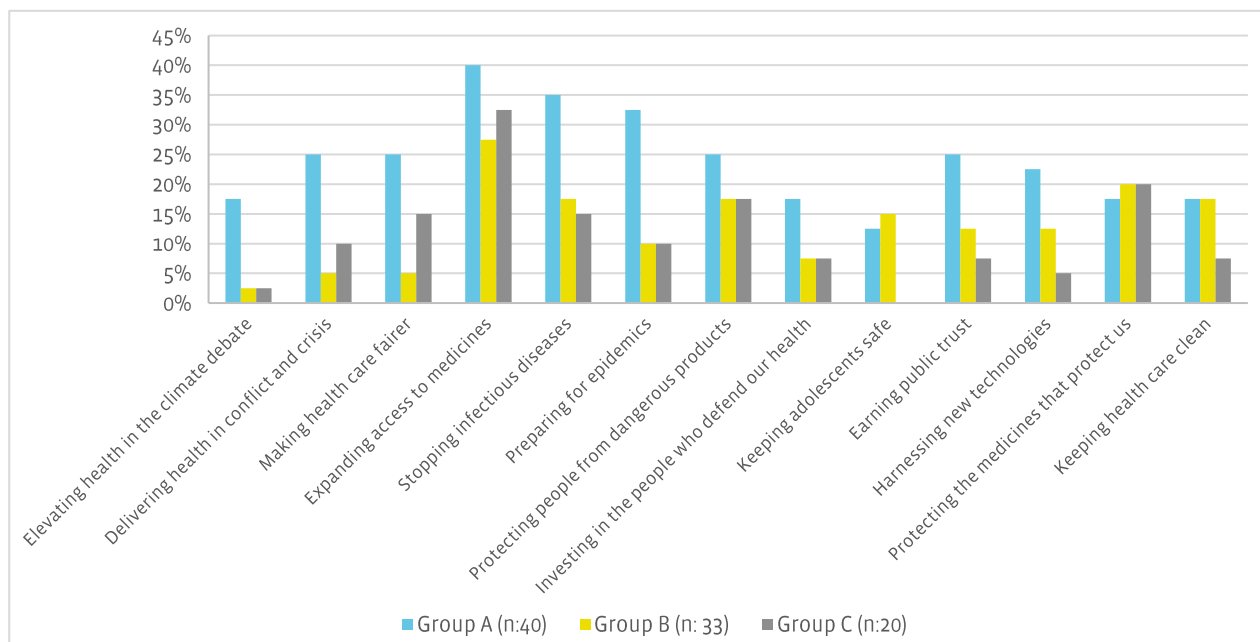


Figure 11. Urgent global health challenges selected by respondent groups A, B and C

* Stunting is “the impaired growth and development that children experience from poor nutrition, repeated infection, and inadequate psychosocial stimulation” (retrieved from: <https://www.who.int/news/item/19-11-2015-stunting-in-a-nutshell>)

Expanding access to medicines is the global health challenge that individuals in Group A most commonly expect their ECPGs to work on (40%). It is also the global health challenge that the highest number of ECPGs (33%) stated they had initiatives to achieve. There were similar percentages in terms of individual knowledge on the initiatives led by ECPGs (Group B) and organisations’ initiatives (Group C) across global health challenges, such as the need to stop infectious diseases, prepare for epidemics, protect people from dangerous products, invest in the people who defend our health, protect the medicines that protect us and elevate health in the climate debate. While some organisations have initiatives to deliver health in conflict and crisis and make health care fairer, some of their members (Group B) were not aware of these initiatives, as evidenced by the low percentage in these categories selected by individual respondents.

There was a gap between the expectation of individual respondents (Group A) and the initiatives developed by organisations (Group C) related to stopping infectious disease, preparing for the epidemic, earning public trust, harnessing new technology and elevating health in the climate debate. In addition, there were no current initiatives conducted by organisations on keeping adolescents safe.

Urgent global health challenges expectations and initiatives across regions

Figure 12 summarises urgent global health challenges being selected by each group of respondents across regions. Expanding access to medicines was the most frequent challenge selected across regions.

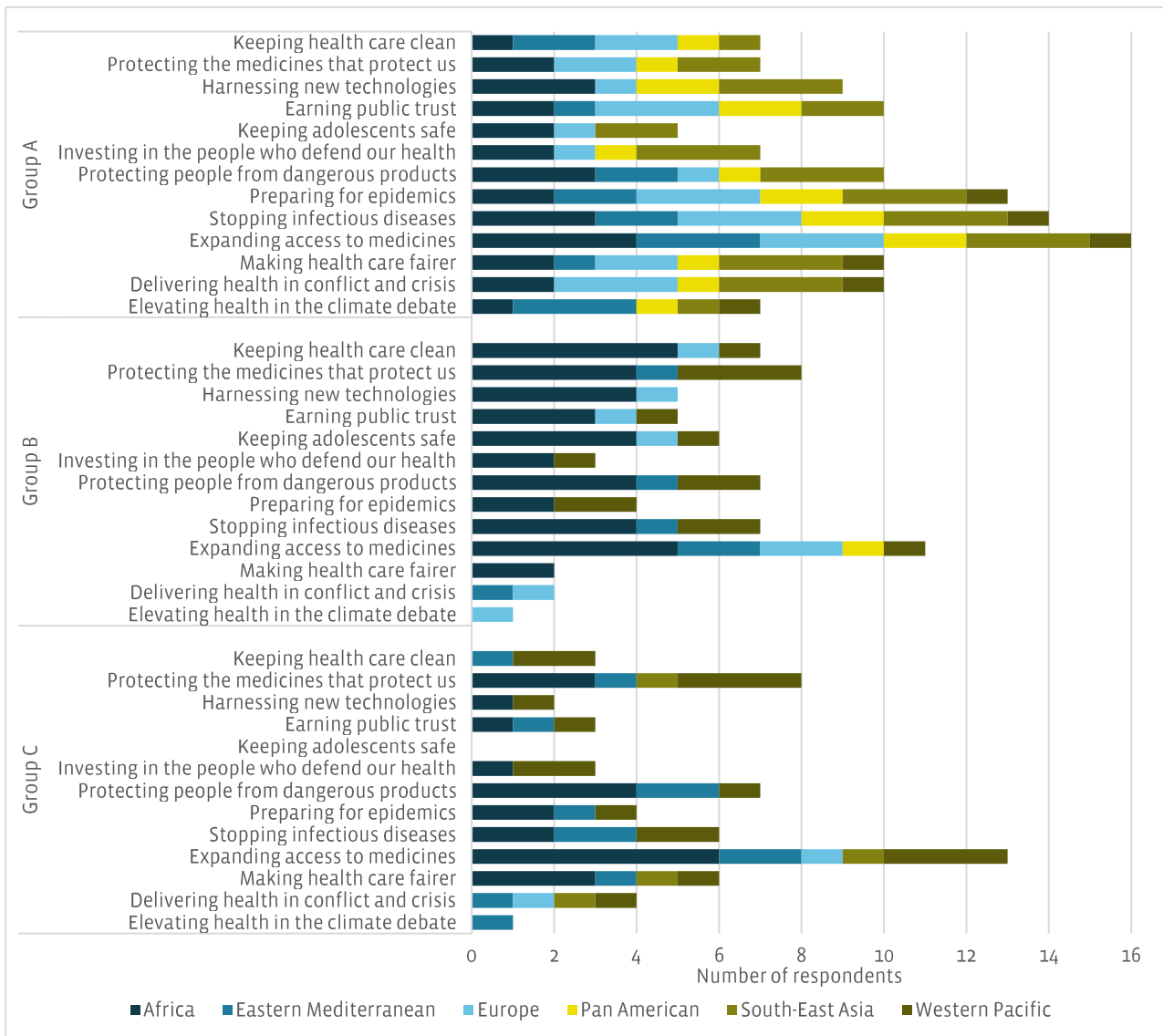


Figure 12. Urgent global health challenges categories selected across regions

Africa

More organisations were working on expanding access to medicines in the African region, protecting the medicines that protect us, making healthcare fairer, and protecting people from dangerous products than individuals would have expected. However, there were fewer initiatives in elevating health in the climate debate, delivering health in conflict and crisis, keeping adolescents safe, and keeping healthcare clean, which individuals without ECPGs believe deserve attention. In Kenya and Tanzania specifically, individuals who do not know there is an ECPG in their country (Group A) expected ECPGs to focus on more global health challenges. This presents an opportunity for ECPGs in these countries to develop initiatives to address these challenges.

ECPGs gave examples of initiatives for expanding access to medicines in Algeria and Zimbabwe, where the ECPGs joined the parent organisation to increase access to treatment and increase the use of digital technology for the supply chain management. Some organisations also highlighted their involvement in stopping infectious disease, preparing for epidemics and protecting people from dangerous products. They did this by conducting awareness campaigns on social media for the fights against the misuse of antibiotics and against counterfeit medicines, and developing an awareness platform named “A7mini” (Protect me) during the COVID-19 pandemic in order to share reliable information and status of the pandemic with the general population.

Some individuals provided more information on initiatives that they hoped ECPGs could initiate. For example, in South Africa, in delivering health in the conflict area, individuals expected ECPGs to provide healthcare to communities in war regions. In Tanzania, an individual suggested they should lead advocacy related to an increased role of pharmacists in the climate debate, conflict and crisis, pandemic preparedness, and pharmacovigilance and regulatory processes. They also highlighted that ECPGs could stop infectious diseases through health information and advocacy related to the use of innovation and technology in pharmaceutical service provision. Related to protecting adolescents, it was suggested that ECPGs could advocate the provision of sexual and reproductive health services by pharmacists. In Uganda, individuals suggested that the ECPG could support the ministry of health in developing a National Formulary and update the treatment guidelines related to the expansion of medicines access. Building awareness of safe medicine and waste disposal of dangerous medicines like chemotherapy were also encouraged by respondents.

Eastern Mediterranean

In the Eastern Mediterranean region, two of three ECPGs conducted initiatives to expand access to medicines, stop infectious diseases, and protect people from harmful products. The ECPG in Lebanon highlighted that it initiated a mobile clinic to give opportunities for members to reach out to people in need of care and medicines. Similarly to the ECPG in Africa, it conducted an awareness campaign for stopping infectious diseases. Related to protecting people from harmful products, it conducted a teaching session on how to dispose of medicines safely and how to differentiate between fake and original medicines. One of three organisations conducted initiatives on the other challenges, including preparing for epidemics, investing in the people who defend our health, keeping adolescent safe, and harnessing new technologies. The ECPG in Pakistan highlighted that, during COVID-19, it supported the government to deal with emergencies by providing volunteers.

Half of the respondents in Group A expected ECPGs to work on expanding access to medicines and elevating health in the climate debate; however, there were no expectations for ECPGs to work on five of the 13 global challenges. Most of the respondents in Group B were not informed of ECPGs’ work on these challenges, signalling a need for more health promotion and communication. It is particularly noteworthy that the ECPG in Pakistan has had initiatives on 10 of the 13 urgent global health challenges. Although the ECPG in Lebanon may have worked on fewer challenges, Lebanese individuals are well informed of the ECPG initiatives.

Europe

In the European region, delivering health in conflict and crisis, expanding access to medicines, stopping infectious diseases, and preparing for epidemics are the top challenges individuals from Group A expect ECPGs to be focusing on. From these, the ECPG in Portugal has had initiatives for expanding access to medicines and delivering health in conflict and crisis. None of the individuals from Group A in the region expected ECPGs to work on elevating health in the climate debate.

A German individual suggested activities that could be led by the ECPG in Germany, such as spreading the word on future epidemic prevention, and providing scholarships and awards for pharmacists regarding investment in the health workforce.

Pan-American

There were limited data available on the Pan-American region. Two of eight respondents from Group A expected ECPGs to work on expanding access to medicines, stopping infectious diseases, preparing for epidemics, earning public trust, and harnessing new technologies. One in three respondents from Group B agreed that ECPGs are working on those challenges, while one in eight respondents from Group A expected ECPGs to work on the other challenges, except for keeping adolescents safe. A suggestion from an individual in Guatemala to tackle expanding access to medicines was to “create programmes to expand access to medicines for chronic diseases”.

South-East Asia

All 13 global health challenges are expected to be worked on by ECPGs in the South-East Asia region, with the least emphasis on elevating health in the climate debate and keeping health care clean. The ECPG in Indonesia has previously led initiatives on delivering health in conflict and crisis, while ECPG that in India has had initiatives on expanding access to medicines, protecting the medicines that protect us, and making health care fairer. For example, the ECPG in India has “conducted various awareness drives in school colleges and to local people and spread awareness about the importance of mental health”, “distributed necessary medicines to poor people at the time of COVID” and highlighted “safe disposal of expired drugs awareness”.

Western Pacific

Almost all the 13 global health challenges are being worked on in the Western Pacific region, except elevating health in the climate debate and keeping adolescents safe. Three out of four organisations have worked on protecting the medicines that protect us and expanding access to medicines, and two of four have worked on keeping health care clean, investing in the people who defend our health and stopping infectious diseases. It is impressive that the ECPG in Malaysia has worked on eight of the 13 urgent global health challenges and the ECPG in Australia has worked on five. However, given the low percentage of respondents who were informed of these initiatives, there may be a need for more promotional activities to increase awareness of the programmes.

3.5.2.3 Primary health care

Figure 13 shows the findings of each group related to primary health care across regions.

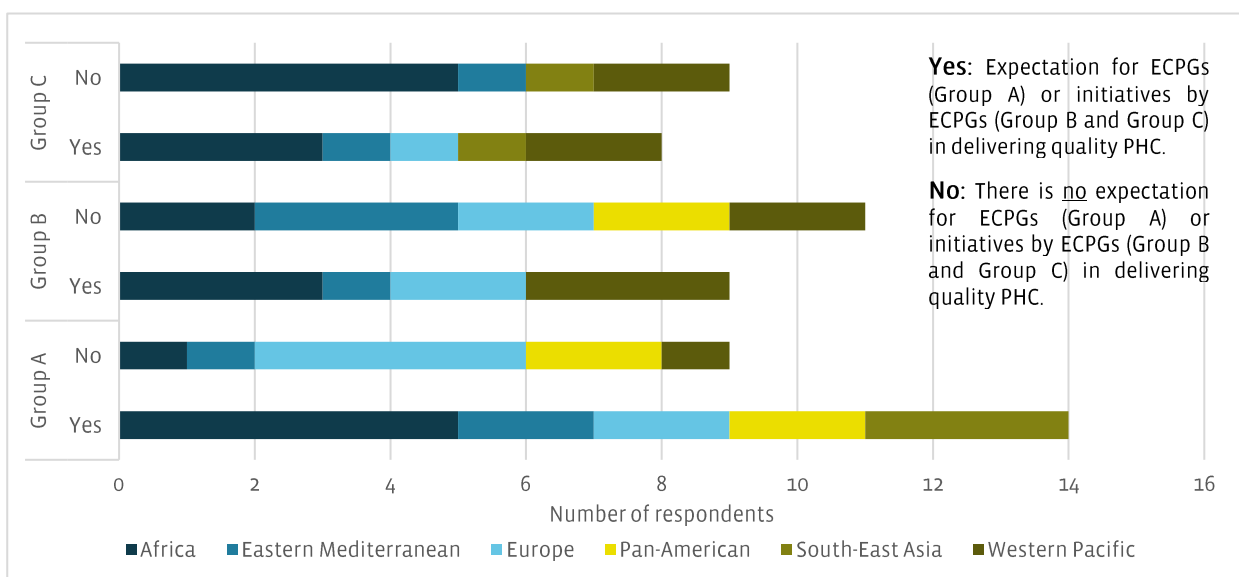


Figure 13. Primary health care expectations and initiatives across regions

Fourteen out of 40 respondents (35%) (Figure 13) expected ECPGs to lead initiatives in primary health care. Respondents from Tanzania, Uganda, Chile, Guatemala, Egypt, Albania, Malta, Bangladesh and Nepal

highlighted that if there were ECPGs in their countries, they would like ECPG to have an interventional role and advocate not only primary health care directly but also indirectly by means of the profession:

“Pharmacovigilance is important in light of the increasing challenges of antimicrobial resistance and for protecting the people” — Tanzania

“Although we all understand the burden of poor-quality medicines, it is not taken into focus in UHC discussions. I urge healthcare systems to look at pharmaceuticals supply chain quality when discussion UHC” — Tanzania

“Advocacy on the role of pharmacists in primary health care” — Uganda

“Training in primary care and access of quality and safe medicine” — Chile

Six out of 33 (27%) respondents highlighted that ECPGs in their countries had led some initiatives in primary healthcare. Respondents from Kenya, Portugal and Australia said that they were not aware of ECPGs' initiatives in primary health care; however, the answers from organisations (Group C respondents) revealed that their organisations have initiatives in primary health care. Some initiatives highlighted by Group B respondents who were aware of the ECPG initiatives are as follows:

“Pharmaceutical care implementation plans” — Poland

“Massive health-related awareness campaigns” — Nigeria

“Training young pharmacists to become the ambassadors of the profession through continuing pharmacy education post-grad” — Lebanon

Eight out of 20 organisations (40%) stated that they had led initiatives to deliver primary health care, mainly related to congresses and webinars. Some initiatives highlighted by the organisations are as follows:

“Participate in the organisation of Algerian Federation of Pharmacy national congress of pharmacy with primary health care as one of the main topics covered” — Algeria

“We are motivating the graduates for working in community pharmacy by organising different seminars and helping them in how to open their own setups” — Pakistan

“Educating and training pharmacists; conferences with other healthcare professionals” — Portugal

“Indonesian YPG, mostly in the form of supporting the programme from Ministry of Health, actively gives campaign and education” — Indonesia

“Pharmacist vaccinations, pharmacy professional services (diabetes management, wound care, medication reviews etc.)” — Australia

In the Pan-American Region (Figure 13), although the individuals from Group A expected ECPGs to lead initiatives in delivering quality primary health care, according to the responses from Group B, none of the organisations in this region led this kind of activities. There were no responses received in Group C. This may be an opportunity for FIP YPG and other ECPGs to work with these organisations to develop initiatives on this topic.

3.5.3 Emergency preparedness programmes

3.5.3.1 National programmes on emergency preparedness responses

Figure 14 shows the findings of each group related to the availability of health emergency preparedness and response programmes across regions.

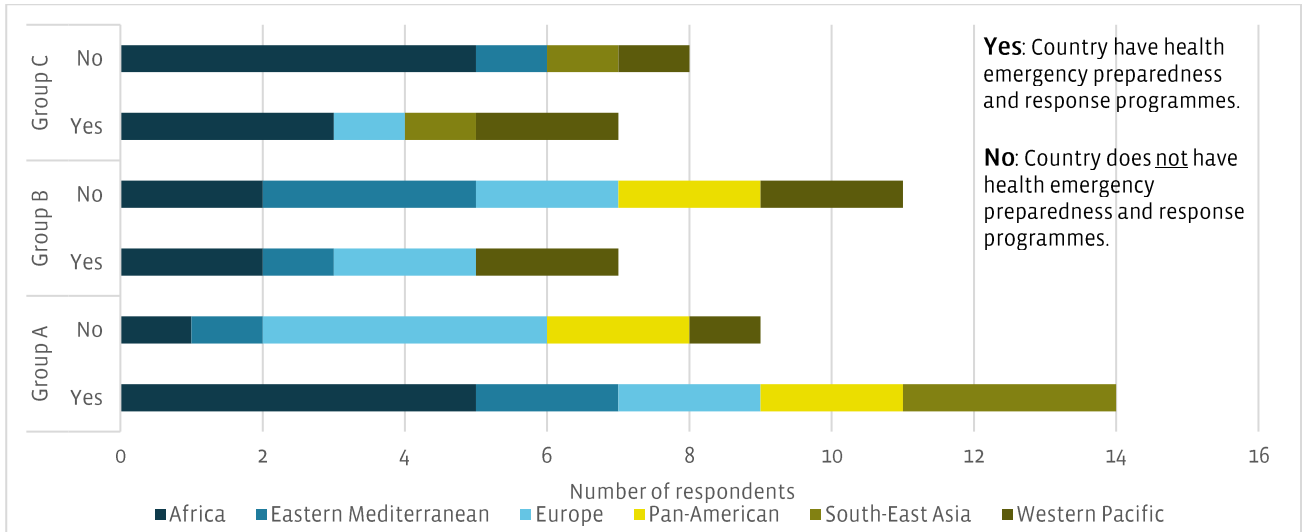


Figure 14. National programmes on emergency preparedness responses across regions

Based on the respondents’ knowledge, there has been an emergency preparedness and response programme in every region. Looking at the comparison of those who were aware of the existence of the programmes and those who were not, it can be seen that respondents in the South-East Asia region and Africa region might be more aware of the national health emergency programmes in their regions. Four out of five respondents selected “yes” in the South-East Asia region, and in the Africa region, 10 out of 18 selected “yes”. Respondents in Pan-American and in the Eastern Mediterranean region may not have been aware of the existence of the programmes; two out of six respondents and three out of eight respondents selected “yes”, respectively. It is not possible to definitively conclude the level of awareness due to the small sample size.

Looking into detail per country within the region, it can be seen that there have been emergency response programmes in Tanzania, Uganda, Ghana, Chile, Guatemala, Egypt, Albania, Croatia, Malta, Poland, Bangladesh, Indonesia, Nepal, China Taiwan and Singapore, as indicated by respondents in all groups in these countries. Respondents across groups were not aware of emergency responses programmes in Cameroon, Mauritius, Zimbabwe, Argentina, Canada, United States of America, Cyprus, Germany, Russian Federation, United Kingdom, Japan and Philippines.

Following the national emergency preparedness programmes, respondents to each category were asked to select the threats that the programmes addressed. Figure 15 shows the summary of threats selected across regions.

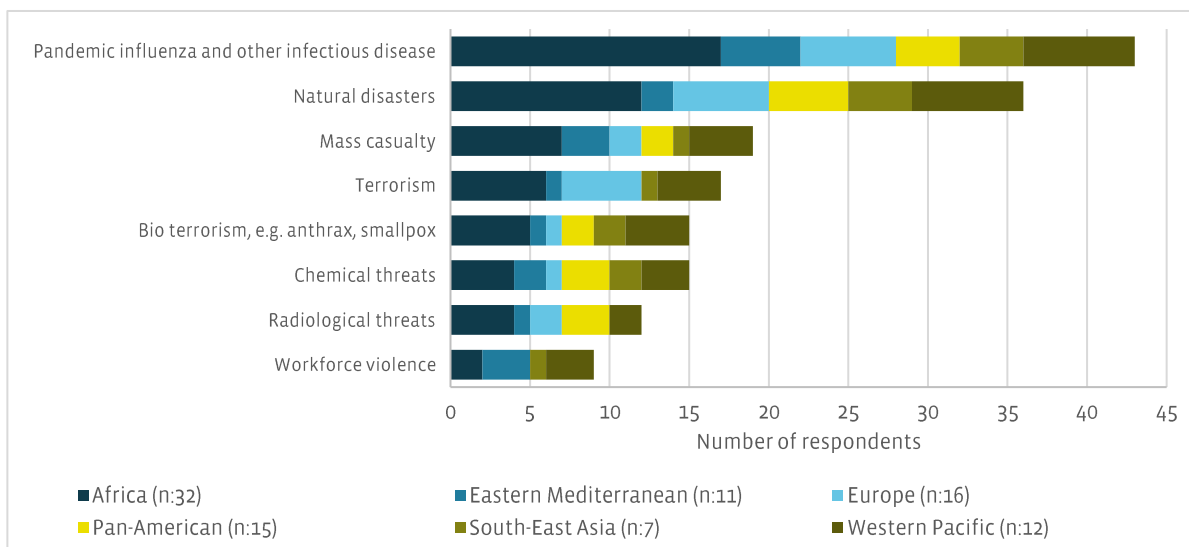


Figure 15. Treats selected across regions

The main threats addressed by the national emergency preparedness programmes across regions were “Pandemic influenza or other infectious diseases”, followed by “Natural disasters” and “Mass casualty”. The workforce violence threat was the least chosen threat, which was only selected by respondents in Western Pacific (Australia, China Taiwan and Malaysia), Eastern Mediterranean (Iraq, Lebanon), South-East Asia (India) and Africa (Algeria, Nigeria) regions.

3.5.3.2 Health emergency responses activities

General findings

Figure 16 summarises the health emergency response activities selected by each group of respondents.

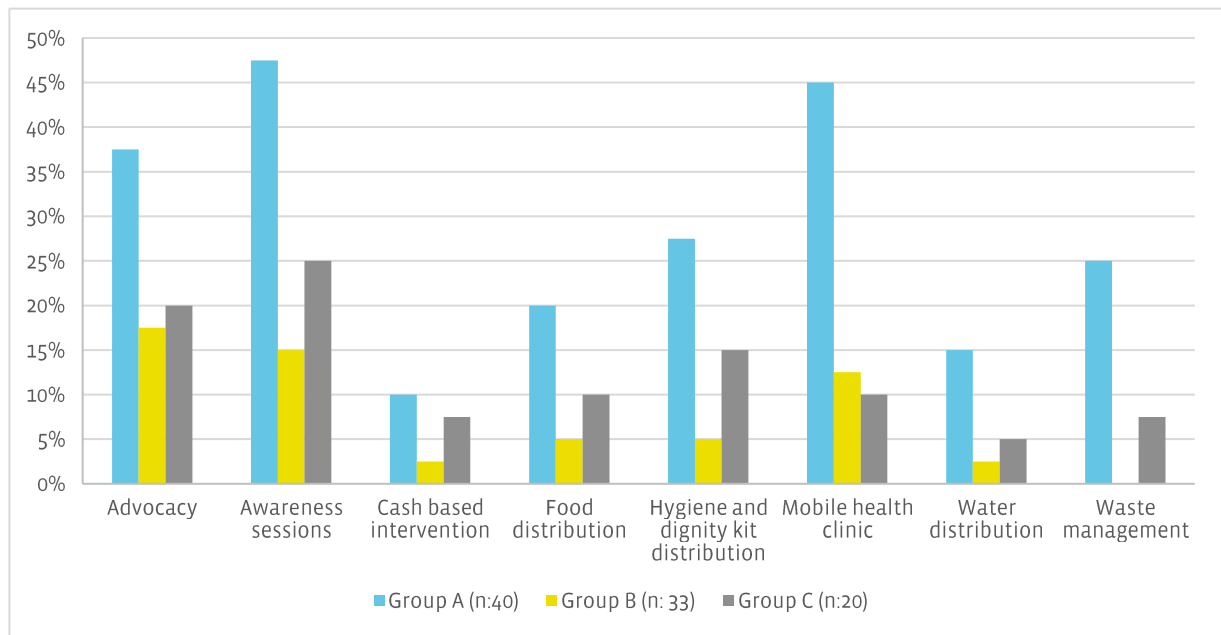


Figure 16. Health emergency response activities selected by respondent groups A, B and C

The top three health emergency response activities expected by participants in Group A were similar to the top three activities that Group B respondents stated the ECPGs in their country have implemented: “Advocacy”, “Awareness sessions” and “Mobile health clinic”. Organisations (group C) have confirmed these results, which stated “Advocacy” and “Awareness sessions” as their top two selected categories. There are also some activities mentioned by Group C related to “Hygiene and dignity kit distribution”. Only 10% of respondents from Group A expected ECPGs to conduct activities on “Cash-based intervention”. Less than 5% of group B respondents observed that ECPGs had conducted activities related to “Cash-based intervention” and “Water distribution”, and no respondents had observed ECPG-conducted activities related to “Waste management”. Similarly, less than 10% of ECPG have conducted activities related to “Waste management”, “Cash-based intervention” or “Water distribution”.

Health emergency response expectations and initiatives across regions

Figure 17 summarises health emergency response expectations and initiatives being selected by each group of respondents across regions.

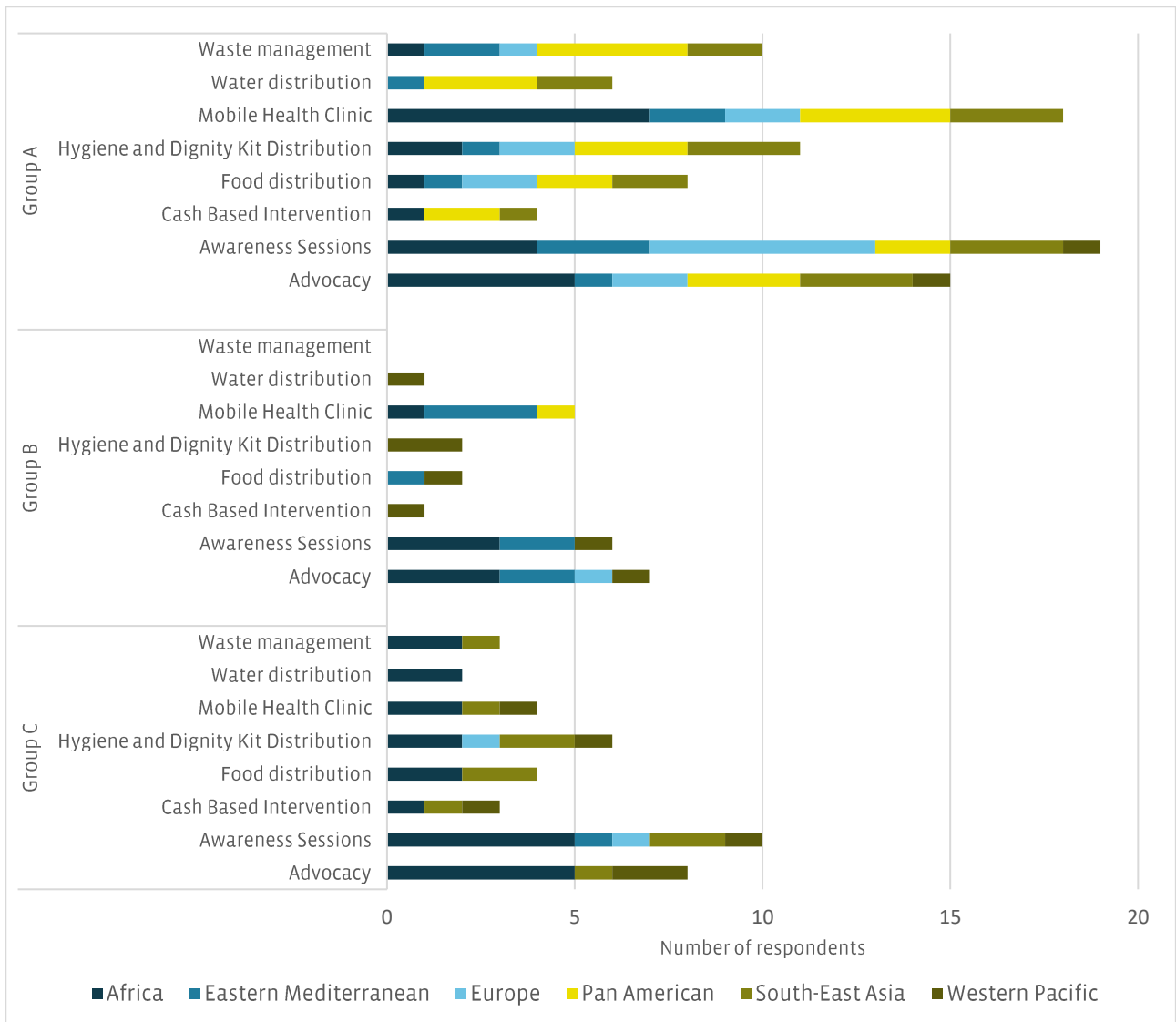


Figure 17. Health emergency response activity categories selected across regions

Africa

“Advocacy”, “Awareness sessions” and “Mobile health clinic” were the main activities chosen across all respondents. Some respondents from Group A and C also considered “Hygiene and dignity kit distribution” and “Waste management” as important health emergency activities for ECPGs to be involved in or that they were already involved.

Eastern Mediterranean

It is interesting to note that while respondents expected ECPGs to conduct activities in many categories of health emergency response activities, the ECPGs (Group C) in the Eastern Mediterranean region have only conducted activities in “Awareness sessions” related to health emergency responses.

Europe

In the European region, similarly to the Eastern Mediterranean region, respondents expected ECPGs to organise activities related to “Awareness sessions”. Interestingly, an ECPG in the European region has only organised “Awareness sessions” and “Hygiene and dignity kit distribution”.

Pan-American

The majority of responders in the Pan-American region are individuals (Group A), and besides “Advocacy” and “Mobile health clinic”, they also expected ECPGs to plan and implement health emergency response activities related to “Waste management”.

South-East Asia

Individuals (Group A) believe that ECPGs should implement or plan activities in all topics; however, “Cash-based interventions” was the least chosen activity. It is also interesting to note that the organisations (Group C) already implement or plan health emergency response activities related to all the topics in the South-East Asia region, except “Water distribution”.

Western Pacific

Western Pacific region respondents only expected ECPGs to conduct activities in “Advocacy” and “Awareness sessions” related to the health emergency response activities. ECPGs from the Western Pacific region (Group B and Group C) have conducted many activities in other categories of health emergency response activities.

3.5.3.3 ECPG involvement in emergency preparedness

General findings

Figure 18 summarises emergency preparedness activities selected by each group of respondents.

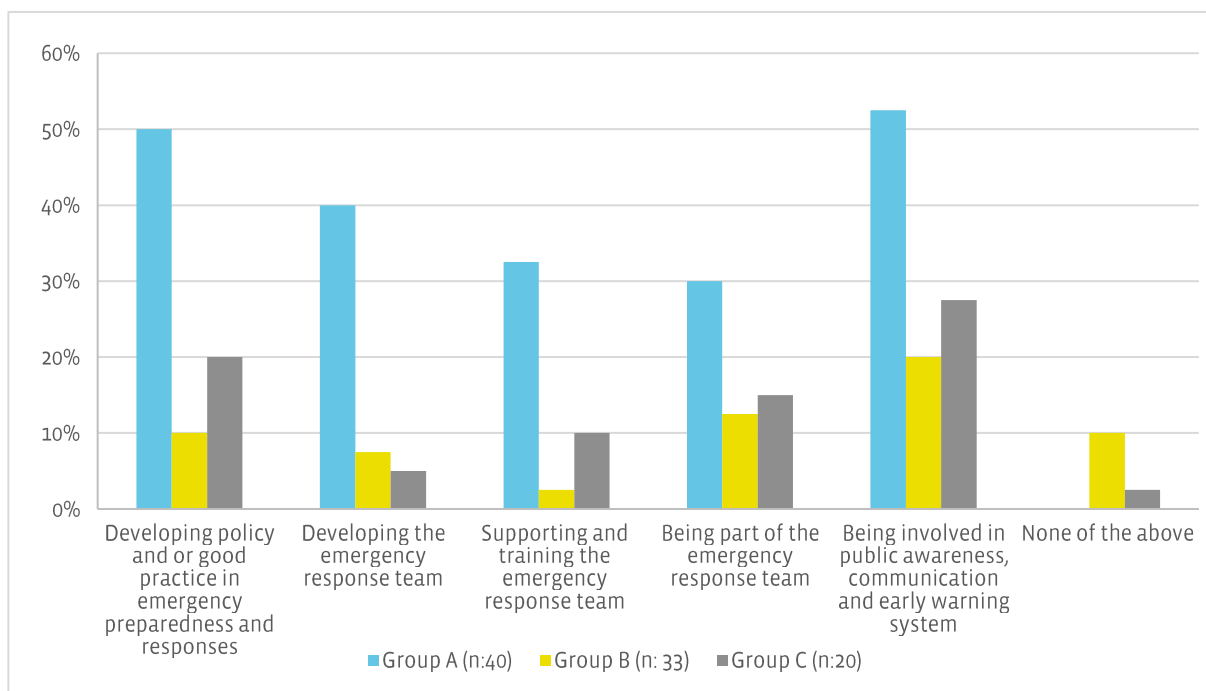


Figure 18. Emergency preparedness activities categories selected by respondent groups A, B and C

More than 50% of respondents in Group A expected ECPGs to be involved in public awareness and policy development in emergency preparedness and responses. Similarly, looking at the organisations themselves, more than 20% of them have been involved in public awareness and policy development in emergency preparedness and responses. Looking at the respondents in Group B, more than 10% of them were aware that ECPGs have been involved in public awareness and been part of the emergency response team. Only 5% of respondent organisations have been involved in developing the emergency response team. Less than 5% of individuals in Group B were aware that ECPGs were involved in supporting and training an emergency response team. Ten per cent of Group B respondents believe that the ECPGs in their countries are not involved in any of these activities. Thus, the awareness of ECPG involvement needs to be increased. FIP YPG can work closely with the other organisations towards achieving this.

ECPG involvement expectations and initiatives in emergency preparedness across regions

Figure 19 summarises emergency activities categories that respondents from group A expect ECPG to be involved in and emergency activities categories that ECPG have been involved in, according to groups B and C of responders.

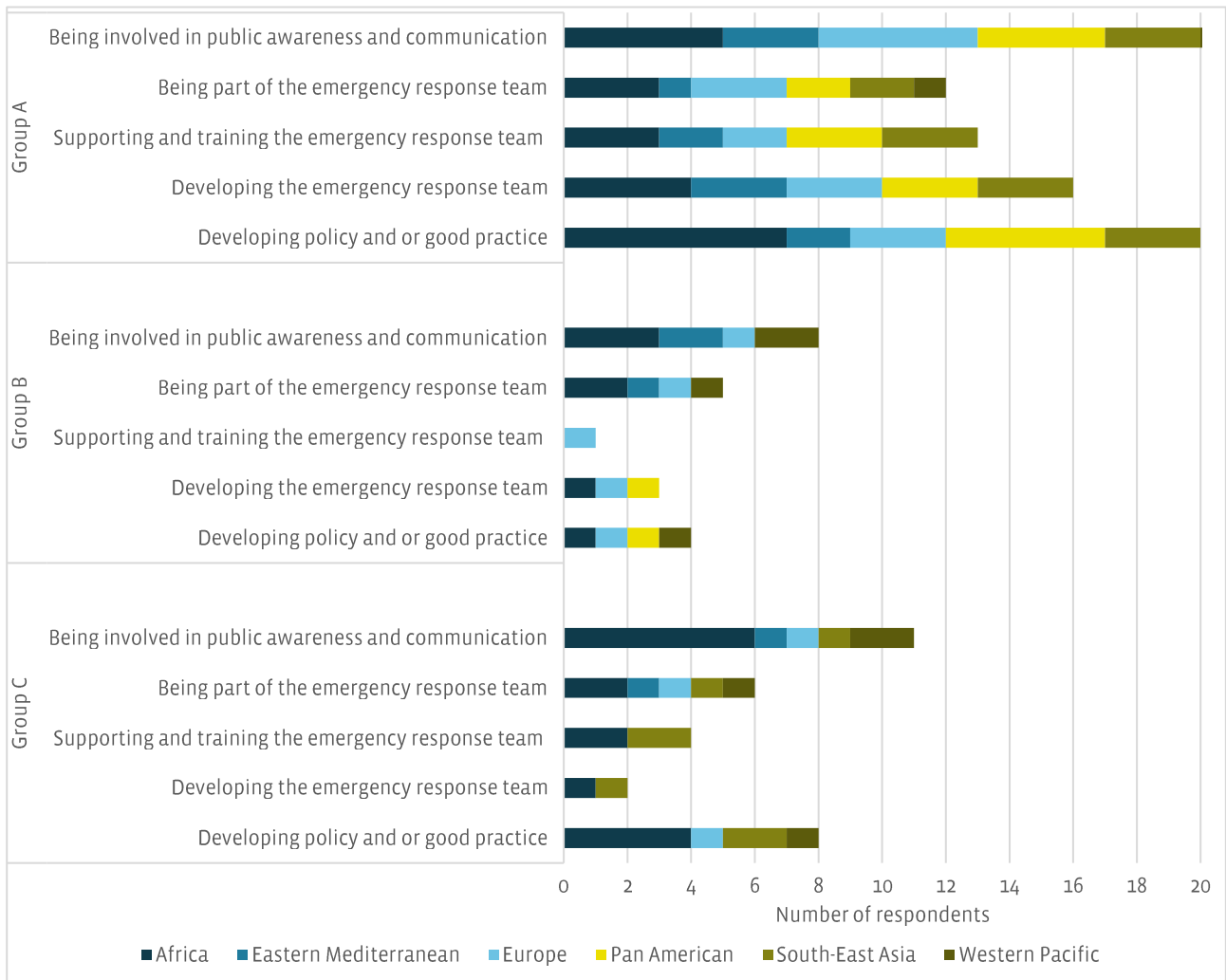


Figure 19. Emergency activities categories selected by respondent groups A, B and C across regions

Africa

Individuals expected ECPGs to be involved in developing policy and/or good practice in emergency preparedness and responses, public awareness communications and early warning systems. Organisations (Group C) were involved in these topics. Other individuals expected ECPGs to be involved in developing the emergency response team in some countries, namely Kenya, South Africa and Tanzania. However, only one out of nine associations (Kenya) reported being involved in developing emergency response teams. Only four out of nine organisations have been involved in developing policy in emergency preparedness, namely Algeria, Kenya, Mauritius and Zimbabwe. Participants were asked to provide a description of the type of training their organisation holds or that they expect it to hold. Workshops, either in person or virtual, were chosen to provide this training for the emergency response team.

Eastern Mediterranean

Developing the emergency response team and being involved in public awareness communication and early warning system were the two major activities that individuals (Group A) expected ECPGs to be involved in.

Respondents in Group B and Group C stated that ECPGs had been involved as part of the emergency response team and in public awareness. Two individuals who have ECPGs in their country (Group B) responded that their ECPG (Lebanon) was not involved in any of the other activities. This could be a point for collaboration between FIP YPG and the national ECPG in Lebanon. Respondents in Group A from Iraq stated that they expect ECPGs to be involved in all of the activities. This can be highlighted as a reason to initiate conversations about developing an ECPG in Iraq.

Europe

In the Europe region, individuals expected ECPGs to be involved in all of the mentioned activities, with a special focus on public awareness, communication and early warning systems. As in the Eastern Mediterranean region, two individuals with ECPGs in their countries (Group B) responded that the ECPG is not involved in any of these activities. However, at least in one of the countries, Portugal, the ECPG is involved in some mentioned activities. Regarding the support and training of the emergency response team in Poland, the ECPG is doing so through online webinars about flu awareness and vaccination.

Pan-American

Developing policy and good practice in emergency preparedness and responses, and being involved in public awareness communication and early warning systems were the two major activities in which individuals expect ECPG involvement. Since no responses from Group C and a very small number of responses from Group B were obtained in the Pan-American region, it is not possible to understand if the expectations were being met. Similar to respondents in the Eastern Mediterranean region, respondents in Group A from Brazil stated that they expect ECPGs to be involved in all of the activities. This could be used to initiate a conversation about developing an ECPG in Brazil.

South-East Asia

Respondents in Group A from Bangladesh and India expected ECPGs in their countries to be involved in all categories of health emergency response activities. The ECPG in India has been involved in most activities described, except for developing the emergency response team. In supporting and training the emergency response team, the ECPG described some initiatives: in India, the Indian Pharmacy Graduates Association Student Forum organises sessions to guide and train young pharmacy students towards emergency situations like COVID-19. Meanwhile, in Indonesia, the Indonesian Young Pharmacists Group has an organisation dedicated to emergency preparedness and response called “*Apoteker Tanggap Bencana (ATB)/Disaster Response Pharmacist*”. This programme was initiated by the Indonesian YPG West Java steering committee in collaboration with the Indonesian Pharmacist Association West Java Regional Board and the National Agency for Disaster Management of West Java Province (see case study in Chapter 4).

Western Pacific

In the Western Pacific region, only the ECPG in Australia has reported its involvement in developing policy related to emergency preparedness. An individual respondent in the Philippines (Group B) also reported their ECPG had been involved in policy development. Involvement in public awareness was also evident in Australia, Malaysia and the Philippines. In China Taiwan, Group B respondents highlighted that their ECPG was involved in the emergency response team. The Japanese ECPG responded that it is not involved in any of the described activities.

3.5.3.4 COVID 19 responses

ECPG initiative expectations and involvement related to COVID 19 responses

Figure 20 summarises COVID 19 responses that respondents expected ECPGs to initiate and COVID 19 responses that ECPGs have initiated.

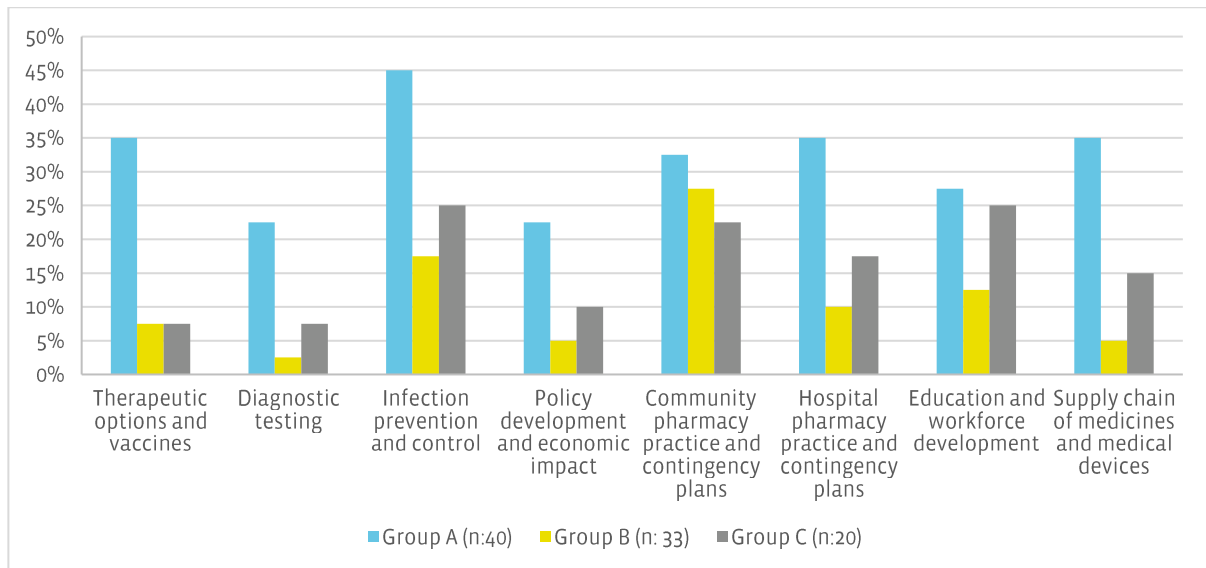


Figure 20. Emergency activities categories selected by respondent groups A, B and C

According to the responses from Groups B and C, the top three initiatives that they expected from ECPGs in response to COVID-19 were involvement in infection prevention and control, community pharmacy practice and contingency plans, and education and workforce development. Individuals who do not have ECPGs in their countries (Group A) expected ECPGs to implement initiatives in therapeutic options and vaccines and in diagnostic testing, but less than 10% of the organisations (Group C) responded that they have initiatives in these areas. Similarly, while less than a quarter of respondents in Group A expected ECPGs to initiate diagnostic testing responses, less than 10% of Group C respondents have been involved in COVID 19 responses. It is also interesting to note that less than a quarter of respondents in Group A expected ECPGs to initiate activities related to policy development and economic impact.

Figure 21 summarises COVID 19 responses that respondents expected ECPGs to initiate and COVID 19 responses that ECPGs have initiated across regions.

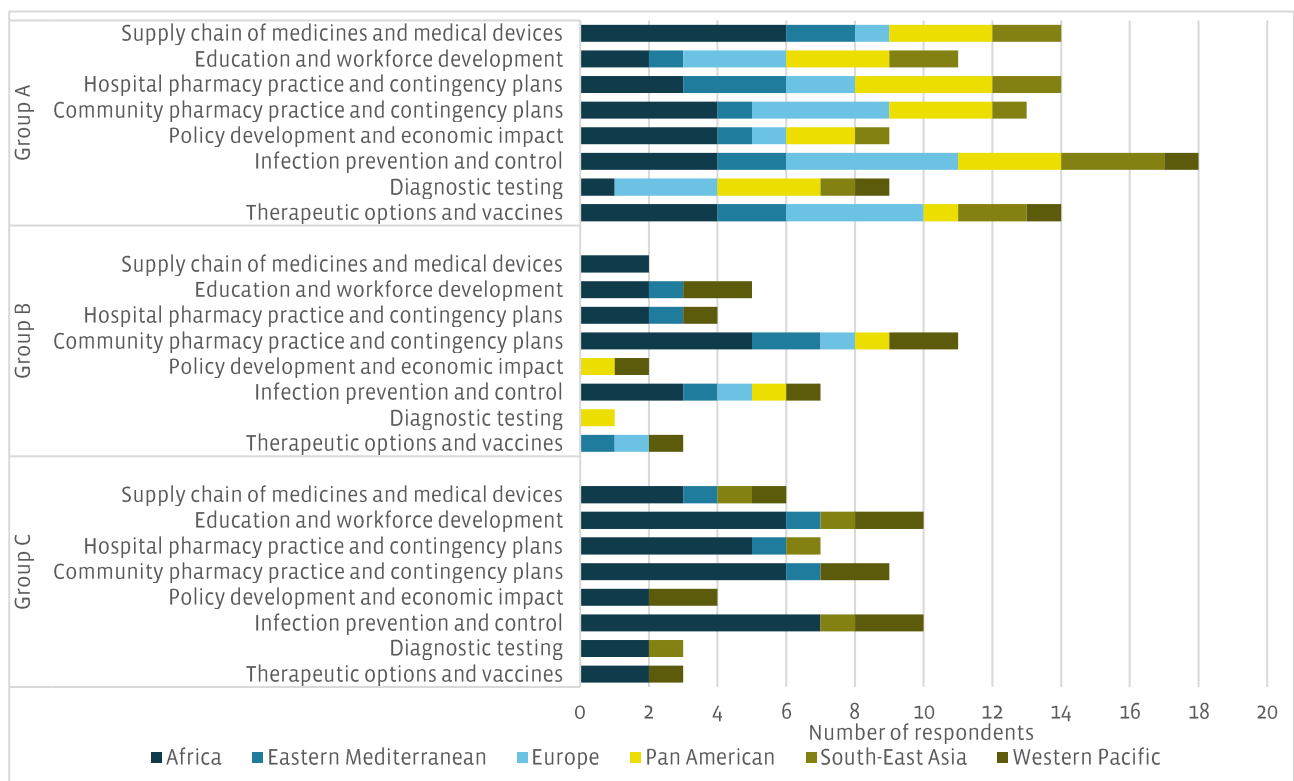


Figure 21. Summary of COVID 19 responses selected by respondent groups A, B and C across regions

Africa

Organisations within the African region have initiated responses across all areas. Infection prevention and control, community pharmacy practice and contingency plans and education workforce development have been initiated by most organisations in this region. However, the majority of individuals from Group A expected ECPGs to be involved in the supply chain of medicines and medical devices (Kenya, Nigeria and Tanzania). ECPGs in Tanzania and Nigeria, however, had not been involved in this category.

Eastern Mediterranean

Organisations within the Eastern Mediterranean region, namely Lebanon and Pakistan, have initiated responses in the supply chain, community and hospital pharmacy practice, education, and workforce development. Individuals from Group A in Egypt and Iraq expected ECPGs to initiate activities in most categories except for diagnostic testing.

Europe

There were no responses received from organisations (Group C) in the European region. Individuals in Group B from Poland recorded that the ECPG in Poland has been involved in therapeutic options and vaccines, infection prevention and control, and community pharmacy practice. Individuals in Group A expected ECPGs to initiate responses in most categories, with infection prevention and control as the top area for focus. This makes it an interesting topic for the organisations in this region to work on.

Pan-American

Looking at the responses in the Pan-American region, an individual from the United States of America who has an ECPG in the country (Group B) stated that the organisation had initiated activities in diagnostic testing, infection prevention and control, policy development and economic impact and in community pharmacy practice and contingency plans. Nevertheless, individuals (Group A) expected ECPGs to be involved in all the presented areas, with less expectation in therapeutic options and vaccines, and policy development and economic impact. This topic can be a starting point for national organisations to work on with the help of FIP YPG, although not having any respondents from group C limits the generalisability of these findings.

South-East Asia

In the South-East Asia region, individuals in Bangladesh, India and Nepal considered infection prevention and control as an important area for ECPGs to develop initiatives. The ECPG in India has been involved in this initiative, in addition to hospital pharmacy practice, education and workforce development and supply chain.

Western Pacific

Only one individual from Group A responded in the Western Pacific region, who may not represent the expectations of this region. The ECPG in Australia highlighted that it was involved in most categories except for diagnostic testing and hospital pharmacy practice, while an individual in Australia stated that their ECPG had been involved in hospital pharmacy practice and contingency planning. Individuals in the Philippines stated that their ECPG had been involved in policy development, education and practice development and community pharmacy practice. This may be an interesting opportunity for FIP YPG to collaborate with organisations from this region. In the open text section, an individual (Group B) from China Taiwan commented that ECPGs should take a role in highlighting existing resources available.

Impact of COVID 19 on ECPG activities

In the survey, the organisations (Group C) were asked to grade the impact of COVID-19 on their activities from 0 to 100. Zero means the COVID-19 did not affect their organisation's activities, and 100 means the COVID-19 created total disruption. Figure 22 shows the impact of COVID 19 across countries in each region, with an exception for the Pan-American region since no response from group C was received.

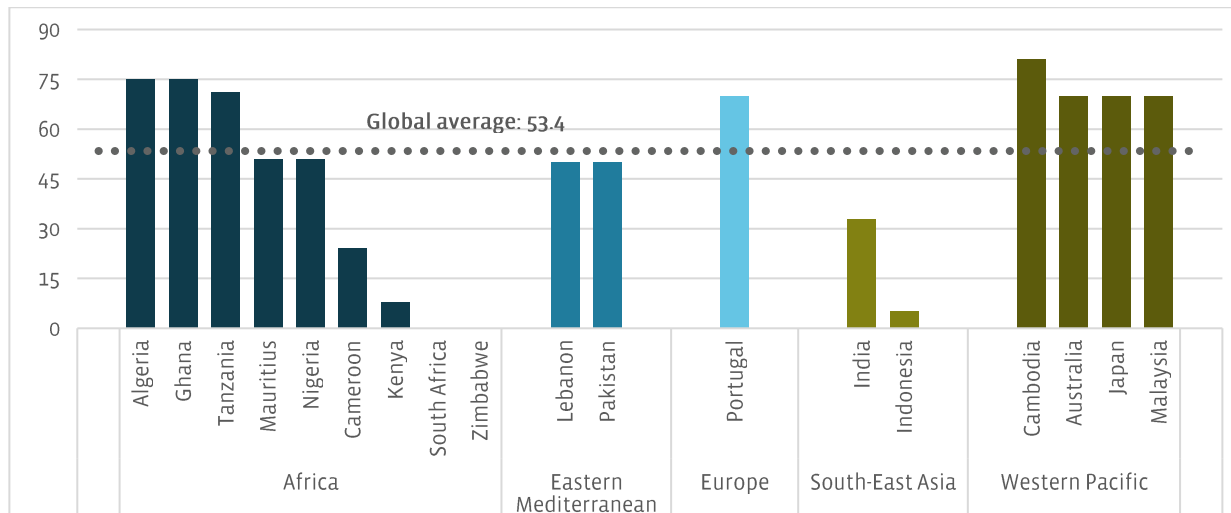


Figure 22. Impact of COVID-19 across countries

Twelve out of 18 countries (66.7%) perceived the impact of COVID 19 on their activities as being more than the global average (53.4), excluding South Africa and Zimbabwe as outliers. The average impact on regions from high to low was Western Pacific (72.7), Europe (70.0), Africa (50.7), Eastern Mediterranean (50.0) and South-East Asia (19.0).

Main challenges during the COVID 19 pandemic

Organisations in Group C were also asked to share the main challenges they faced during the COVID 19 pandemic and how they tackled them.

In general, the main challenges faced by the organisations across regions were related to the movement of face-to-face activities and engagement with members to online sessions or virtual meetings. For example, in South Africa (Africa region), no face-to-face events could go ahead as planned. As a result, the organisation created virtual sessions to hold meetings and the annual general meeting and postponed some conferences. Similarly, in Lebanon (Eastern Mediterranean region), several offline events had to be cancelled. It compensated by offering other online activities, and they conducted the Lebanon Pharmaceutical Students General Assembly online and were able to elect the new board members of the organisation. Another example is in Portugal (Europe region), where the Portuguese Association of Young Pharmacists had to create more online activities because the face-to-face activities were cancelled. It also suffered from the lack of face-to-face contact with board members and events. The ECPG in Malaysia (Western Pacific region) highlighted that it had several events planned to be conducted physically, and it quickly shifted them to online platforms. It saw this as an opportunity since the online webinars and meetings engaged more people than it was expecting.

In Algeria (Africa region), the ECPG was created shortly before the start of the pandemic; thus, it was perceived difficult for it to have all its members involved, especially because not all of them were used to collaborating virtually. Similarly, in Australia, the ECPG had difficulties in keeping members informed on rapidly changing regulations, particularly as a lot of misinformation was circling about digital image prescriptions. It also faced difficulties in supporting members through the public abuse they received during panic buying at the early stages of the pandemic, which they resolved through supply limits, even though it provoked some angry responses from patients. Initially, it was also concerned about workforce shortages, although Australia's low infection rate meant this was not as significant as first predicted.

The ECPG success story in COVID-19

Individuals in group B and organisations in group C were asked to share a success story related to the COVID-19 response (See Figure 23).



Figure 23. Success stories in COVID-19 highlighted by ECPGs across countries

3.5.4 Youth initiatives, expectations and involvement

3.5.4.1 Policy and regulation

General findings

Figure 24 shows the involvement of early-career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by ECPGs in policy and regulation. In general, the percentage of involvement of early-career professionals in each category of policy and regulation was higher than the percentage of initiatives led by ECPGs in each category.

Looking at the involvement of early-career professionals, the top three most selected initiatives for individuals without an ECPG in their country (Group A) are in drug formulary development, prevention programmes and safety programmes. This was mostly similar to respondents with an ECPG organisation (Group B) and ECPGs themselves (Group C) that also showed a larger proportion of participation in these three activities, albeit in a different order. Individuals without an ECPG identified the least participation for young pharmacists in sustainability programmes, whereas individuals with an organisation and the organisations themselves identified the least participation in equality and equity projects.

Looking at the expected ECPG-led initiatives, the top three policy and regulation areas that the respondents selected (Group A) were safety programmes, professional programmes and drug formulary. For individuals with ECPGs (Group B) they believed that prevention programmes were the main policy activity led by ECPGs, which differed from the organisations (Group C), which reported safety programmes as the main policy area for young pharmacists. Sustainability and equality, and equity programmes seem to be the areas in which the least respondents identified young pharmacists' involvement; however, in both cases, a larger proportion of those without an organisation identified it as something they thought ECPGs should lead on.

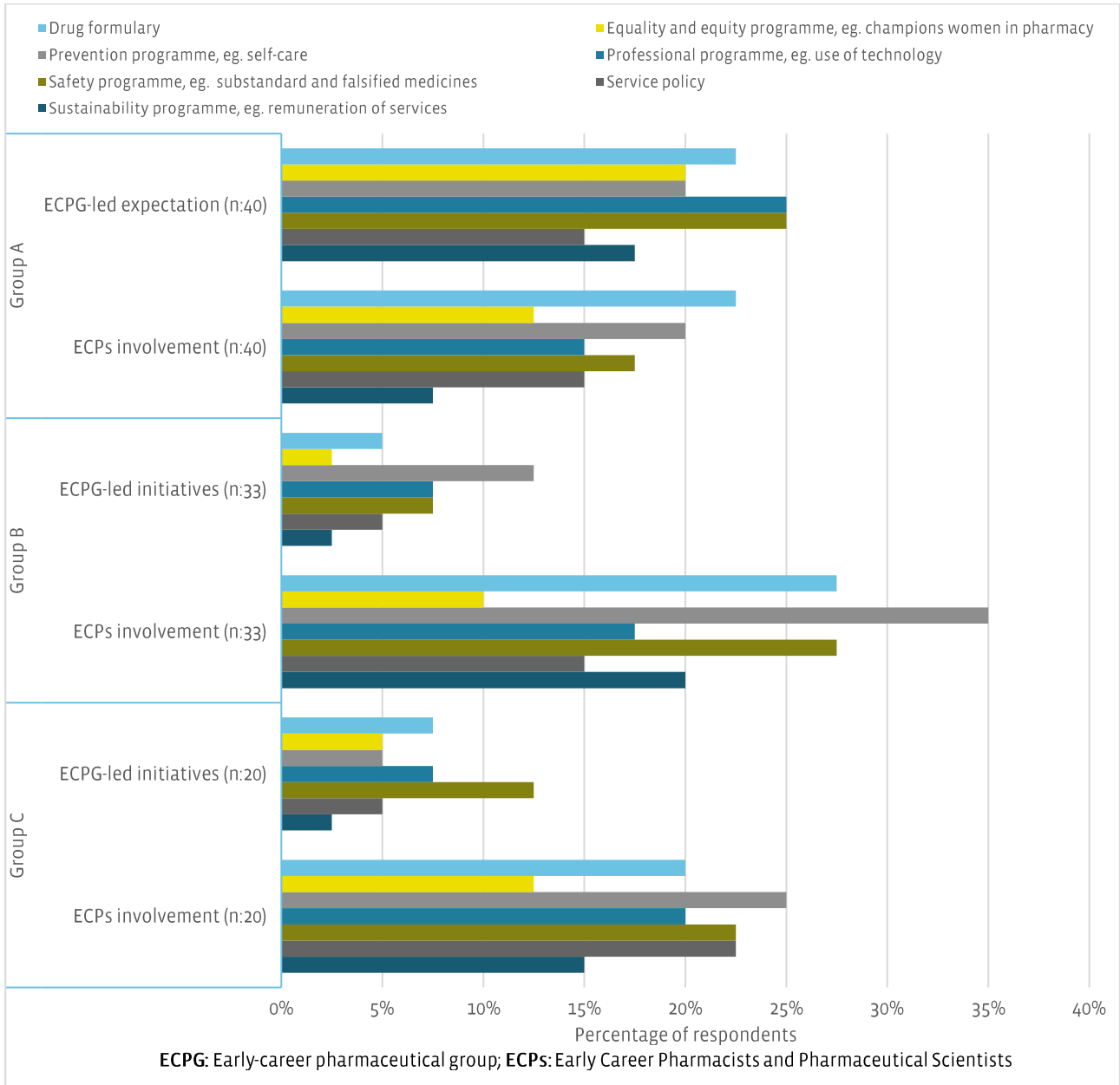


Figure 24. Involvement of ECPs and ECPGs in policy and regulation

Across regions

Figure 25 shows the involvement of early-career pharmacists and pharmaceutical scientists and the expected and actual initiatives led by young pharmacists' groups in policy and regulation across regions.

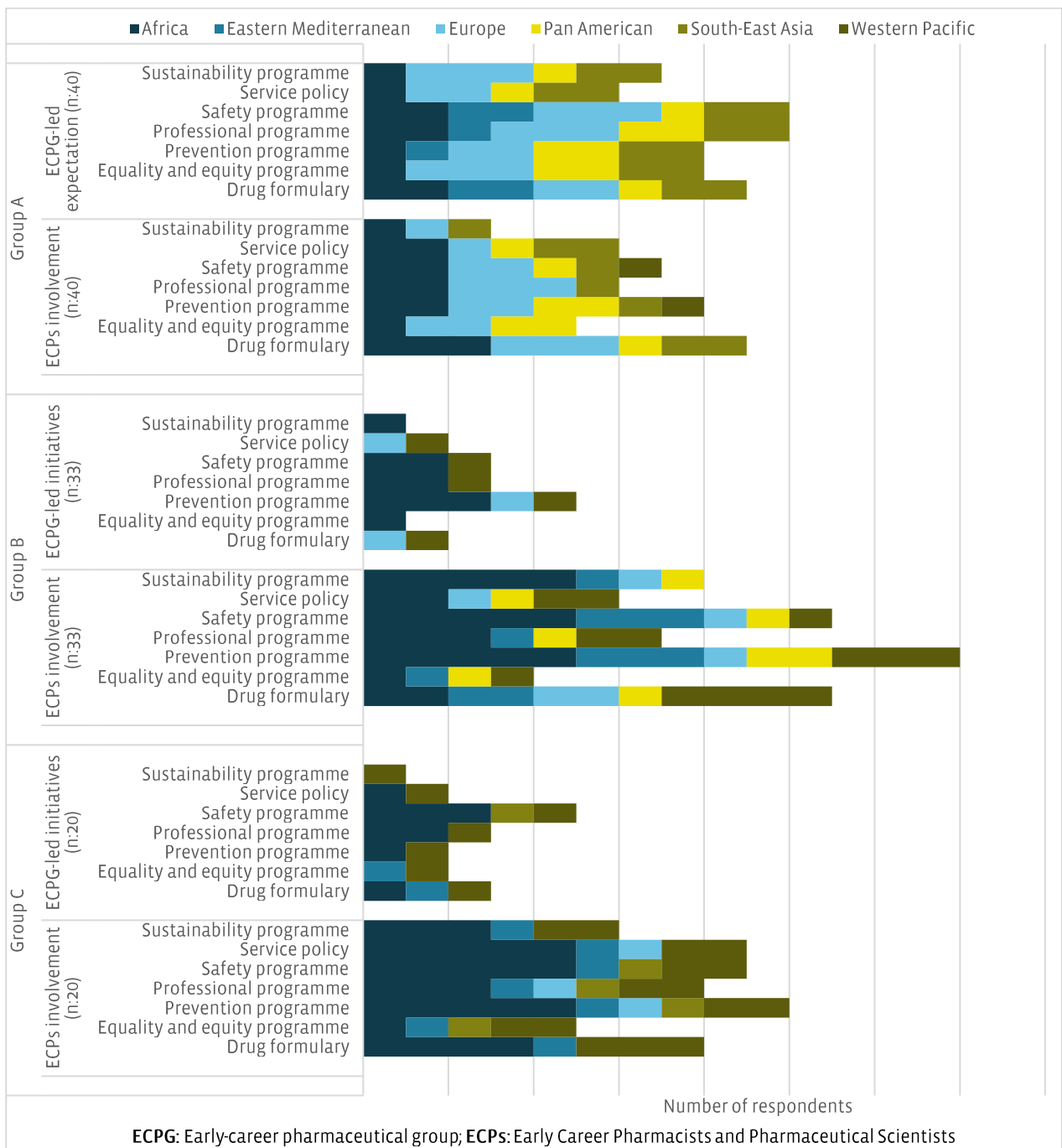


Figure 25. Involvement of ECPs and ECPGs in policy and regulation across regions

Looking at the involvement of early-career professionals (ECPs) across the region, respondents without an ECPG (Group A) from Africa, Europe, America and South-East Asia regions expected involvement of ECPs across most of the policy categories. On the other hand, respondents with an ECPG (Group B and Group C) from Africa, Eastern Mediterranean and the Western Pacific regions indicated the involvement of ECPs across most of the policy categories. Looking at country level, whereas ECPGs in Australia, Malaysia, Pakistan and Nigeria reported young pharmacists' involvement in all seven policy categories, ECPG those in Ghana, South Africa, Tanzania, Lebanon, Yemen, Ukraine, Indonesia and Japan reported no involvement in any of them. Thus, those that are actively involved in policy may serve as mentor organisations for those who currently report no involvement. There were reported differences between individuals and the ECPGs in some countries, as observed for Lebanon and Australia. For these countries, the ECPGs may need to better promote young pharmacists' involvement in these policy areas or clarify their current role. Furthermore, differences observed

and reported between individuals and organisations may be due to a difference in understanding of the policy category or how they define involvement.

Looking at what is expected of ECPGs, it seems that respondents without an ECPG in the African and European regions expected ECPGs to be involved in leading all or most of the policy areas identified. Respondents in this group (Group A), for example, from Sri Lanka, Nepal, Germany, Cyprus, United Arab Emirates, Pakistan, Jordan, Egypt, Venezuela, Guatemala, Chile, Brazil, South Africa, Rwanda and Kenya, did not expect ECPGs to lead in any of the seven policy and regulation categories identified. Interestingly, for each region with organisation respondents (Africa, Eastern Mediterranean, Europe, Southeast Asia and Western Pacific), few identified active initiatives in each policy category. It is likely that those that are involved in these policy areas are dependent on and driven by the response from a particular country's organisations. Safety programmes are the policy area where most countries have ECPGs leading initiatives (n = 5), and Australia is the only country with an ECPG leading initiatives in sustainability programmes.

Policy and regulation initiatives led by organisations varied from region to region; however, analysis was limited by the small number of open-text responses. For those who responded, the main areas of involvement for ECPGs were awareness campaigns for health conditions (Africa, Eastern Mediterranean), development and provision of guidelines for pharmacist-led services (Africa) and direct public health education (Western Pacific, South-East Asia, Eastern Mediterranean). A more detailed example of initiatives and description will be explained below. There were no detailed examples provided by respondents from South-East Asia or the Pan-American region.

Africa

The Pharmaceutical Society of South Africa YPG highlighted its initiatives in the professional programme, including the mentorship pilot programme and ongoing social media guidelines development. The Zimbabwe YPG highlighted its initiatives in the prevention programme through a drug abuse campaign. It also conducted a professional programme for its members related to digital technology in community pharmacy practice. In the service policy, it developed support for professional services for early-career pharmacists. It also highlighted its initiatives in the sustainability programme related to developing policy documents on the remuneration of young pharmacists in Zimbabwe.

In Tanzania, a respondent shared information about ECPG involvement in the development of the national drug formulary. This was also mentioned by a respondent in Uganda, where the ECPG, together with Pharmaceutical Society of Uganda, supports the Ministry of Health in developing a formulary. The respondent from Tanzania highlighted the role of the ECPG in advocating equality and equity in the pharmaceutical workforce, the provision of pharmaceutical services, and the increased role of pharmaceutical personnel in self-care and other prevention programmes. The respondent also shared that the ECPG in Tanzania organises various professional development programmes. Similarly, in Uganda, an initiative on the ECPG championing the use of technology in the health sector, e.g., m-health, was shared. Related to safety programmes, a respondent in Tanzania shared information about working closely with the local regulatory authorities to ensure effective delivery of safety programmes. A respondent in Uganda discussed the ECPG organising pharmacovigilance campaigns and supporting research involving the use of technology to detect falsified medicines.

Eastern Mediterranean

One initiative mentioned by the Pakistan YPG was around collaboration and involvement with the government to create a drug formulary to ensure the list included safe, effective and cost-effective drugs for patients. In terms of the equity and equality programme, the Pakistan YPG highlighted an initiative involving reserving 40% of the paid internships for women.

Europe

One initiative highlighted by a respondent in Albania in terms of the equity and equality programme was to discover and list the young pharmaceutical scientists in the country. However, it was not made clear how this initiative relates to the equity and equality programme.

Western Pacific

Australia is the only country with an ECPG that is involved in each policy and regulation category. Interestingly, the individual respondents from Australia did not identify young pharmacists to be involved in any of the policy and advocacy areas. Thus, the Australian ECPG could serve as a mentor organisation for those

with less policy and advocacy involvement and promote awareness of its activities to individuals in the country.

3.5.4.2 General services

General findings

Figure 26 shows the involvement of early-career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by YPGs in the general services category. Similarly to involvement in policy and regulation, the involvement of ECPGs as a group, in general, was lower than the involvement of ECPs at the individual level.

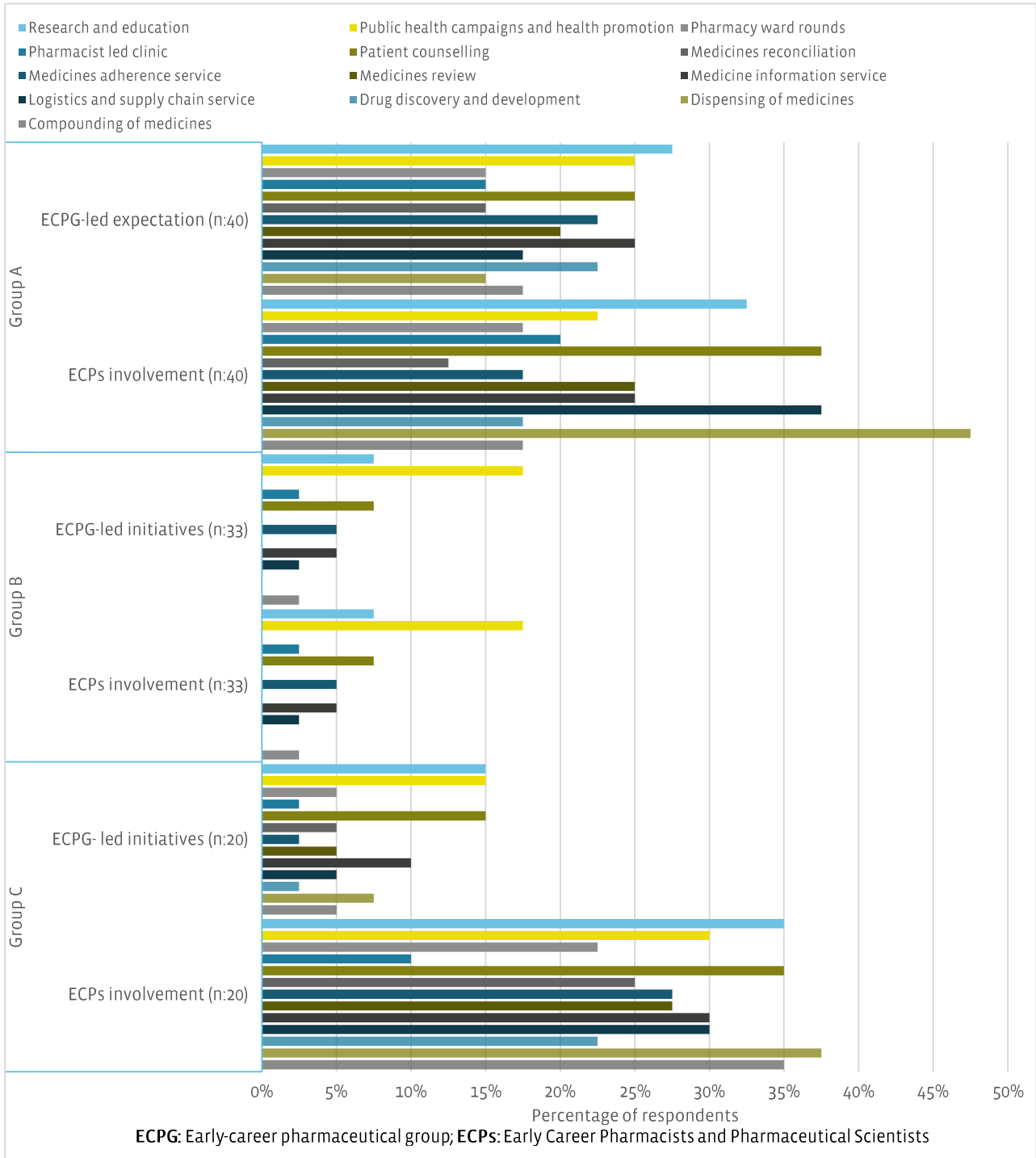


Figure 26. Involvement of ECPs and ECPGs in general services

Looking at the involvement of ECPs, more than one-third of respondents in Group A and Group C responded that ECPs had been involved in dispensing of medicines, patient counselling, and research and education. While one-third of Group A respondents also stated that ECPs had been involved in logistics and supply chain, one-third of Group C respondents stated they had been involved in the compounding of medicines. Interestingly, in Group B, 18% of respondents indicated involvement in public health campaigns and health promotions. Limited involvement was reported for patient-care services. Only 10% of Group C respondents indicated that ECPs had been involved in pharmacist-led clinics, 3% of Group B in ward rounds, and 13% in Group A in medicines reconciliation.

Looking at the expected ECPG-led initiatives, more than 25% of respondents in Group A expected ECPGs to initiate programmes related to medicine information services, patient counselling, public health campaigns and health promotion, and research and education. However, 18% of individuals who have an ECPG in their country (Group B) were aware of public health campaigns and health information as an activity specifically led by their ECPGs, followed by patient counselling, and research and education. As for Group C respondents, more than 10% of organisations had led programmes related to patient counselling, public health campaigns and health promotion, and research and education, which is similar to Group A respondents' expectations.

Across regions

Figure 27 shows the involvement of early career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by YPGs in general services across regions.

In the Figure, it is possible to observe the general services provided by young professionals across regions. Dispensing of medicines was the activity most reported across all regions. In Africa and Western Pacific regions, several organisations indicated that compounding of medicines is a general service provided by young professionals, although the individual respondents (Groups A and B) did not have that perception. In the Pan-American, Eastern Mediterranean, European and Western Pacific regions, respondents reported that young professionals are involved in all the mentioned activities. In the European and South-East Asia regions, there was no reported youth involvement in medicines reconciliation. Respondents also reported limited involvement in pharmacist-led clinics across regions, except in Africa, the Americas and Western Pacific.

Looking at the involvement of ECPGs in general services across regions in the Americas, Europe and South-East Asia, individuals from Group A expect ECPGs to be involved in all the provided topics. In Africa, individuals expect ECPGs to be involved in drug discovery and development, pharmacist-led clinics, and pharmacy ward rounds, but the organisations (Group C) are reportedly not involved in these. This may be an opportunity for improvement or future initiatives for the ECPG in the region. In the Eastern Mediterranean region, an individual without an ECPG from Iraq expects ECPGs to be involved in almost all activities, except dispensing of medicines and pharmacy-led clinics. Individuals from Egypt and Iraq also expect ECPGs to be involved in medicines adherence services, but from the organisations that responded (Lebanon, Pakistan and Yemen), no activity in this area is provided. In the Pan-American and European regions, no responses from organisations (Group C) were obtained, making it difficult to analyse ECPG involvement in general services. Similarly, there are no responses from Group A responders in the Western Pacific region, so it is not possible to understand the expectations of individuals without an ECPG in their country. The reduced number of responses from individuals (Group A and B) makes it difficult to extrapolate data for conclusions.

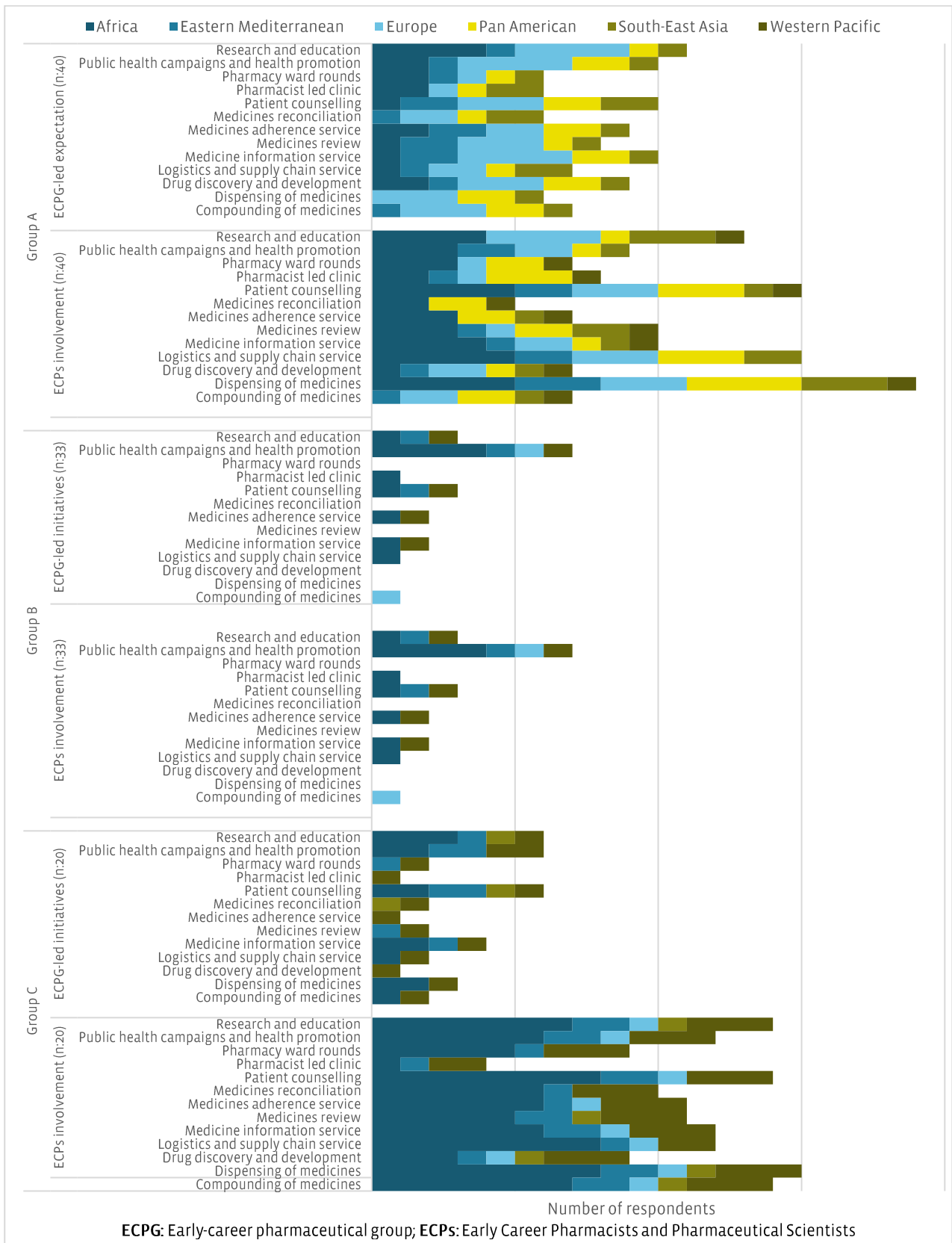


Figure 27. Involvement of ECPs and ECPGs in general services across regions

Africa

In Tanzania, individuals expected ECPGs to develop programmes to support young pharmacists in drug discovery and development, develop a specific network of young pharmacists working in logistics and supply chain services,

and build guidelines for effective provision of medical information and adherence services to the community. They also expect ECPGs to be included by the relevant bodies in medicines review and advocate young pharmacists' involvement in ward rounds in hospitals. In community pharmacy, they expect ECPGs to facilitate the initiation of pharmacist-led clinics in the country. In the academic field, they expect ECPGs to offer training in research proposal writing and facilitate the development of scholarships in research and postgraduate studies. In Uganda, individuals expect ECPGs to provide toolkits for research and education.

In Algeria, the ECPG organises a patient counselling event and facilitates public health campaigns and health promotion, mainly on social media and national radio. In Zimbabwe, the ECPG has a "Young researchers and innovation hub" for sharing information and good practices in the research field.

Eastern Mediterranean

Dispensing of medicines in community pharmacies is the general service most provided in the Eastern Mediterranean region, followed by logistics supply and chain services, and patient counselling. For example, in Lebanon, the organisation representing students and young professionals provides patient counselling training through competitions and training, and public health campaigns and health promotion. In Lebanon, young professionals organise awareness campaigns on diabetes, hypertension and HIV. In Pakistan, the ECPG organised mass awareness campaigns about dengue. The YPG offers medicine information services in Lebanon through social media posts. It also provides research and education services with a new research project about rare diseases, drugs and unspoken medical procedures. Medicines adherence services, medicines reconciliation, and pharmacy ward rounds are the general services that ECPGs in this region are reportedly less involved in, although individuals from Egypt and Iraq expect ECPGs to provide these services.

Europe

In Germany, individuals who do not have an ECPG in their country provide services on research and education by yielding webinars series on research topics. In Turkey, young professionals give training to the public on antimicrobial stewardship as a health promotion initiative. In Europe, medicines reconciliation is not being provided by young professionals, according to all groups of responders, although individuals (Group A) from the Russian Federation and the United Kingdom expect ECPGs to lead initiatives towards this topic.

Pan-American

Only Group A (individuals who do not have ECPGs in their country) respondents provided input in the Pan-American region. According to these responses, the main general services provided by young pharmacists are dispensing of medicines, logistics and supply chain management, patient counselling and pharmacy-led clinics, especially in Chile, Guatemala and the United States of America. In Guatemala, individuals expect ECPGs to promote investigation and research regarding drug discovery and development. Some countries such as Brazil, Argentina and Venezuela reported that they do not have young individuals involved in any of the described activities. This may be a topic for the FIP YPG to explore at the national level and to help improve the intervention of young professionals in these general services.

South-East Asia

Although in the South-East Asia region, no one chose medicines reconciliation as a service currently provided by young professionals, the organisation from Indonesia leads an initiative towards it, and it stated that it has a movement called "*Apoteker Bageur: Mapay Lembur/ Pharmacist together for the better: door to door walking down the city*" which aims is to visit people in the local area (door to door), asking about their medicines. Dispensing of medicines and research and education are the services in which young individuals are more present, according to responders in Bangladesh, India, Nepal and Sri Lanka, but not in Indonesia. Pharmacy ward rounds and pharmacy-led clinics are services in which young individuals are not involved, yet individuals from Bangladesh and India expect ECPGs to lead initiatives in these services.

Western Pacific

The organisations from the Western Pacific region reported that young professionals are involved in all the general services and also reported that they lead activities in all the described topics. For example, the organisation from Malaysia has an online public health platform named "*Sihat4U*" to provide health information to the population. However, individuals do not recognise the current involvement of youth in logistics and supply chain services or in public health campaigns and health promotion, but an individual from China Taiwan did expect ECPGs to lead initiatives in public health campaigns and health promotion. Thus, organisations may need to increase awareness of their activities in these areas.

3.5.4.3 Specific services

General findings

Figure 28 shows the involvement of early career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by YPGs in condition-specific services. In general, the percentage of involvement of ECPs in Groups A and B of specific services was higher than the percentage of initiatives led by ECPGs in those categories.

Looking at the involvement of ECPs, antimicrobial stewardship, health screening, smoking cessation and alcohol use, and therapeutic drug monitoring are the top four programme-specific services, with at least 18% of respondents indicating involvement across Groups A, B and C. Anticoagulant clinics was the least offered service across all three groups (5%), with care for children, care of elderly and aged, and tuberculosis (TB) clinics being consistently in the least four offered services across all three groups. Family planning was selected in the top four services for Group B (28%) but was among the least selected three services for groups A (10%) and C (13%).

Smoking cessation and alcohol use (10%), antimicrobial stewardship (8%), and vaccination (8%) were the top three services individuals from Group A expected ECPGs to provide, with no individuals expecting ECPGs to provide TB clinic services. ECPGs from Group C reported having initiatives for all 11 services, with vaccination and antimicrobial stewardship ranking highest at 28% and 30%, respectively. However, no individuals from Group B reported knowing about ECPG initiatives on vaccination, TB clinics, or anticoagulant clinics, indicating the need for more awareness.

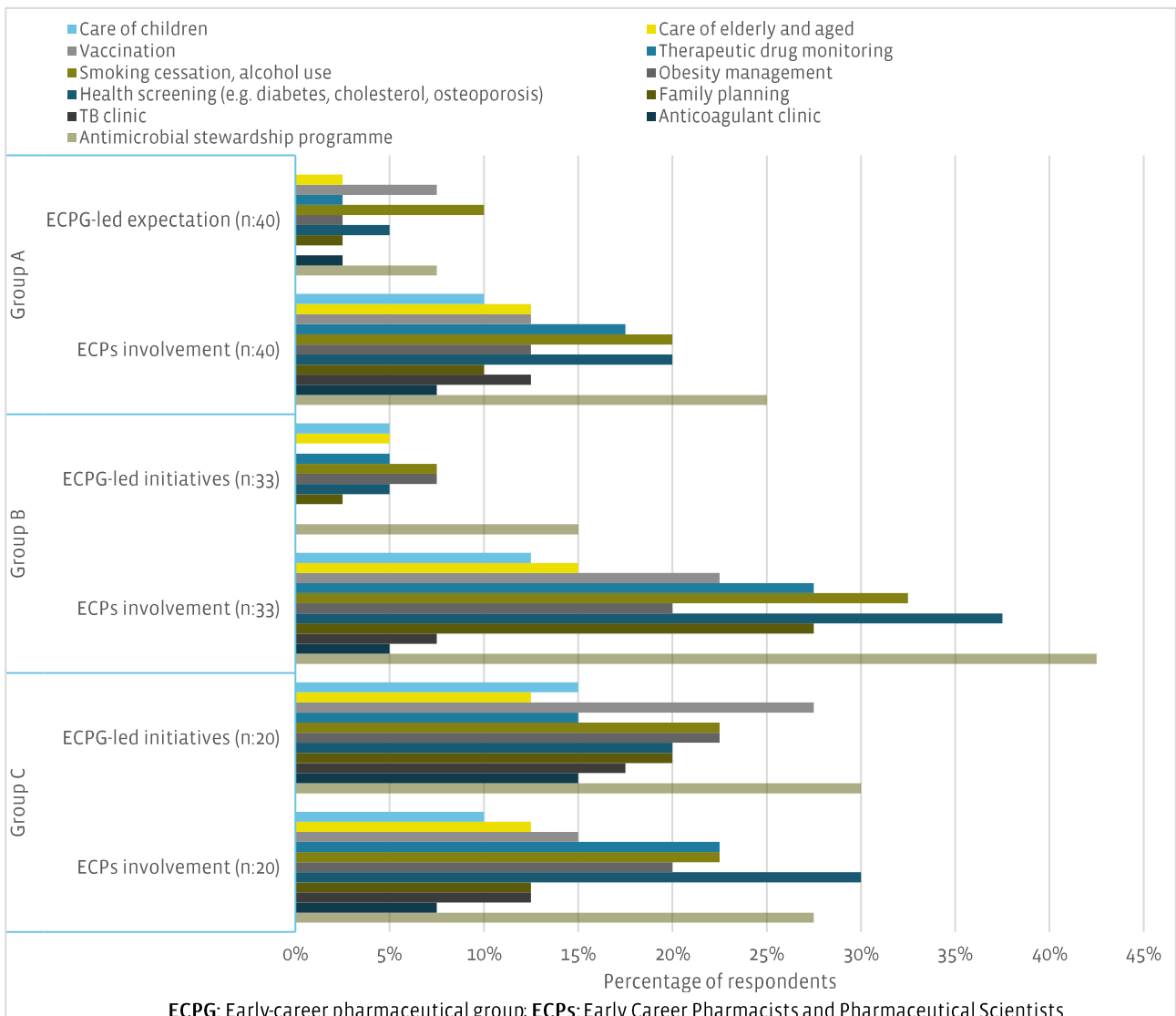


Figure 28. Involvement of ECPs and ECPGs in specific services

Across regions

Figure 29 shows the involvement of early career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by YPGs in specific services across regions.

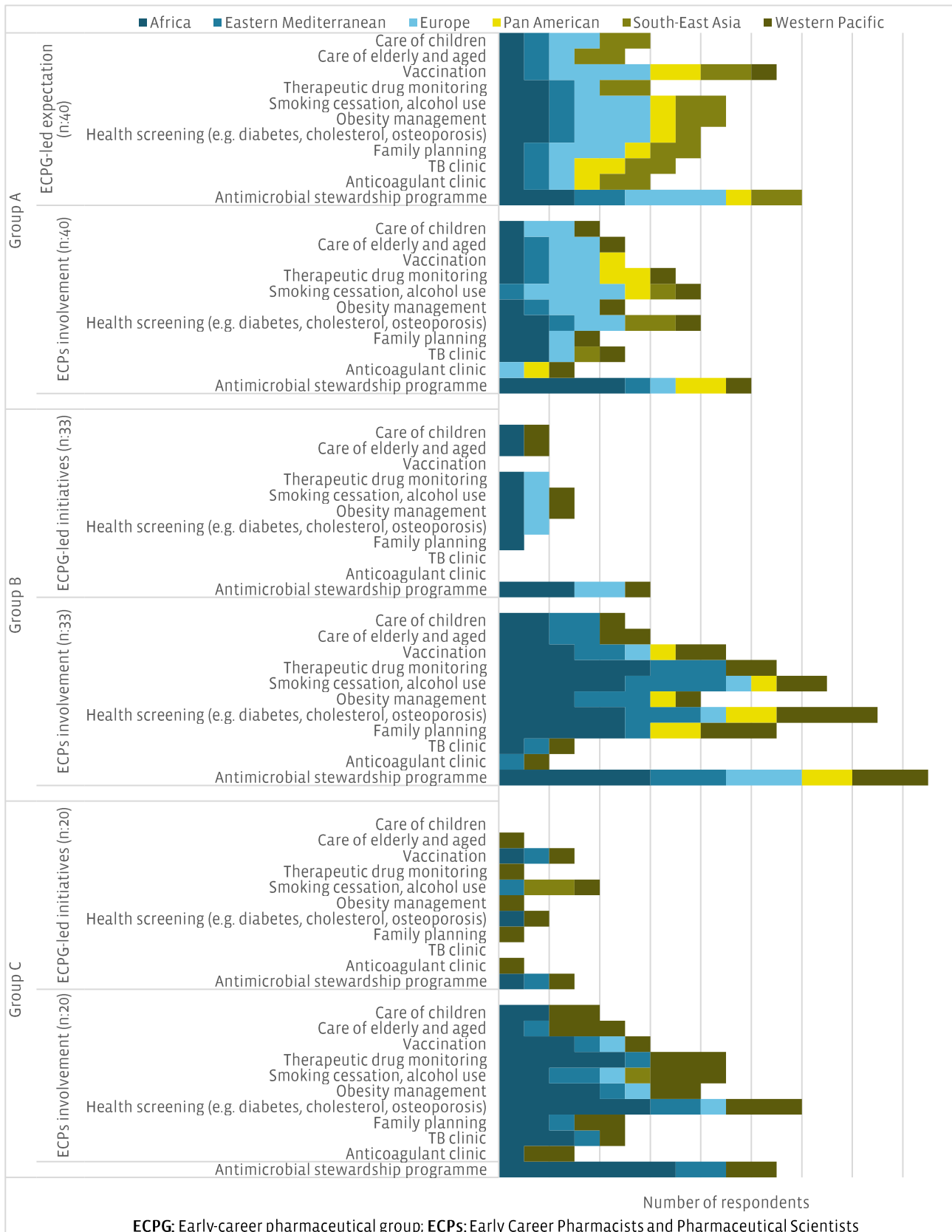


Figure 29. Involvement of ECPs and ECPGs in specific services across regions

Africa

Across all three groups of respondents, antimicrobial stewardship was the specific service ECPs were most involved in, whereas TB clinics and anticoagulant clinics were the services they were least involved in. ECPGs from Group C reported carrying out initiatives in only three services: vaccination, health screening and antimicrobial stewardship. The initiatives described by respondents (Group C) were related to awareness campaigns in health screening and vaccination training programmes. This contrasts with individuals from Group A, who expect ECPG involvement in all 11 specific services.

An individual from Tanzania provided more information on their expectation on ECPG roles in these services; this included: (i) the ECPG to create a standard operating procedure for antimicrobial stewardship and for health screening done at community pharmacies; (ii) the ECPG to increase awareness about anticoagulant clinics and TB clinics in the country; (iii) the ECPG to participate in the development of guidelines for family planning service delivery by pharmacists, for obesity management and addiction management through community pharmacies, and for the care of elderly and aged and care of children through community pharmacies; (iv) the ECPG to facilitate the involvement of young pharmacists in therapeutic drug monitoring; and (v) the ECPG to advocate the provision of vaccination by pharmacists in the country. An individual in Uganda highlighted their expectation for the ECPG to develop and distribute health screening guidelines, especially those that can be carried out in community pharmacies (e.g., blood pressure monitoring).

Eastern Mediterranean

All three groups reported ECP involvement in all 11 specific services, with the least involvement in anticoagulant services and the most in health screening, and smoking cessation and alcohol use. ECPGs from Group C reported carrying out initiatives in only three services: vaccination, smoking cessation and alcohol use, and antimicrobial stewardship. This contrasts with individuals from Group A, who expect ECPG involvement in all 11 specific services. Respondents from group B reported their ECPG initiatives to include raising awareness against improper use of antimicrobial agents and webinars.

Europe

Vaccination, and smoking cessation and alcohol use were the top two services that ECPs were involved in. Individuals without ECPGs expected ECPG initiatives in services including vaccination, smoking cessation and alcohol use, antimicrobial stewardship, health screening, obesity management and family planning. Of these services, ECPGs (Group C) reported having initiatives in vaccination, smoking cessation and alcohol use, health screening and obesity management. This was consistent with the perceptions of individuals from Group B.

Pan-American

From Groups A and B, there were no reports of ECP involvement in TB clinics, care of children, or care of elderly and aged. This was also reflected by individuals in Group A, who did not expect ECPGs to be involved in therapeutic drug monitoring, care of children, or care of elderly and aged services.

South-East Asia

ECP involvement was only reported in TB clinics, health screening, and smoking cessation and alcohol use services. The ECPG in Indonesia reported an initiative in collaboration with Monthly Index of Medical Specialities (MIMS), a pharmaceutical prescribing reference guide company, to train pharmacists as trainers in enhancing effective communication, especially for community pharmacists.

Western Pacific

Across all groups, ECPs were reported to be involved in all 11 specific services: health screening was the highest proportion and TB clinics the lowest. ECPGs in Group C reported leading initiatives in all 13 specific services except the care of children and TB clinic services. However, more awareness is needed as individuals from Group B were not informed of most of these initiatives.

3.5.4.4 Condition-specific

General findings

Figure 30 shows the involvement of early career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by ECPGs in condition-specific services.

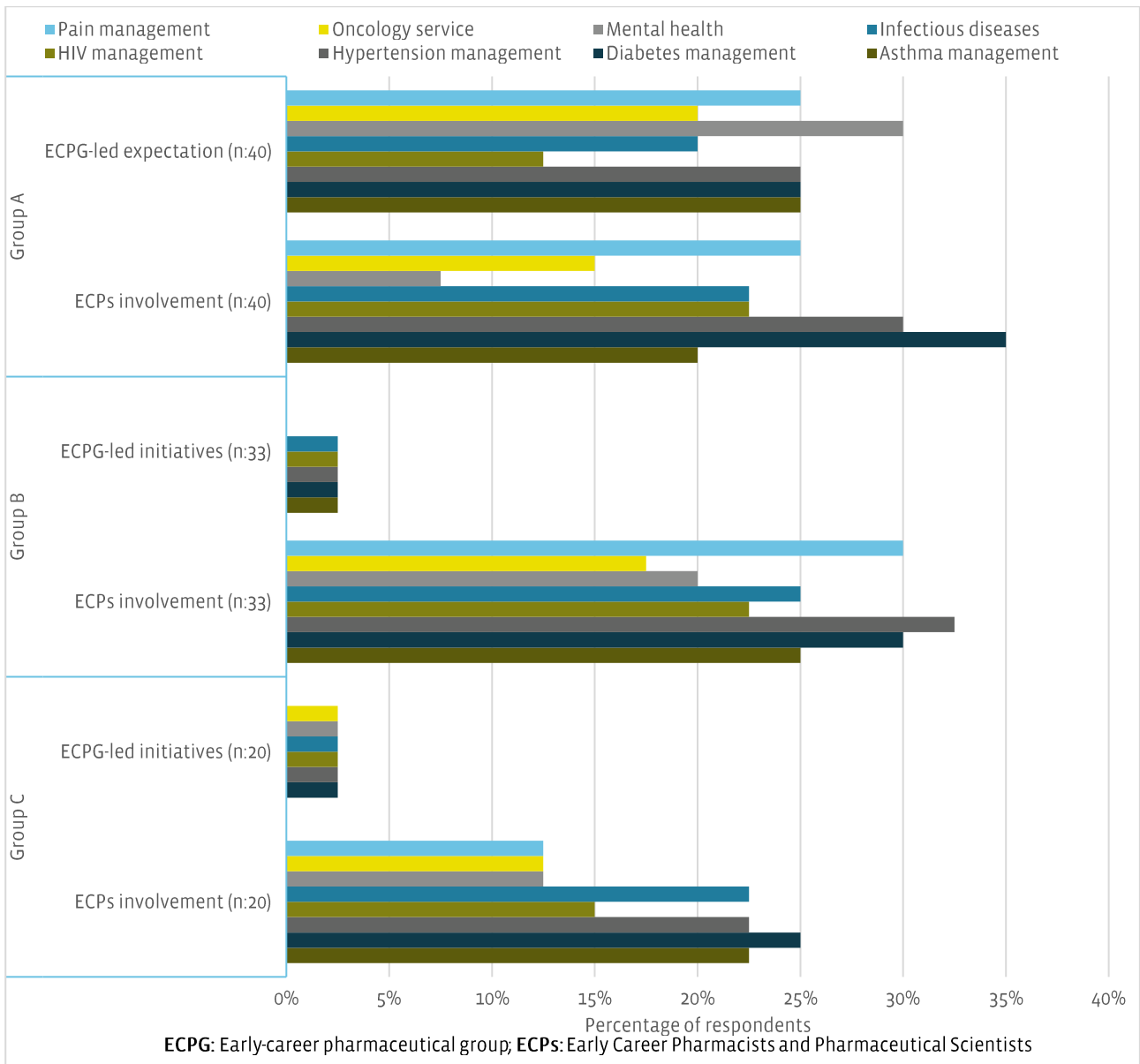


Figure 30. Involvement of ECPs and ECPGs in condition-specific services

More than 20% of respondents in Group C indicated that young pharmacists and pharmaceutical scientists had been involved in diabetes management, asthma management, hypertension management and infectious diseases. Similarly, 25% and more of respondents in Group B mentioned the same categories with the addition of pain management. More than 25% of Group A respondents selected diabetes management, hypertension management, and pain management. Furthermore, mental health and oncology are the two services that respondents indicated are not provided by young pharmacists and pharmaceutical scientists, making these interesting points for the FIP YPG to advocate.

Over 25% of individuals from Group A (without an ECPG in their country) expected ECPGs to lead activities on mental health, asthma management, diabetes management, hypertension management and pain management. Group B (individuals who do have an ECPG in their country) believe that asthma management, diabetes management, hypertension management and HIV management are the main activities the ECPG in their country leads on, however only a small number of the Group B responders completed this question. From the organisations' responses (Group C), asthma management and pain management are the topics in which no organisations are currently leading on.

Across regions

Figure 31 shows the involvement of early career pharmacists and pharmaceutical scientists together with the expected and actual initiatives led by ECPGs in condition-specific services across regions.

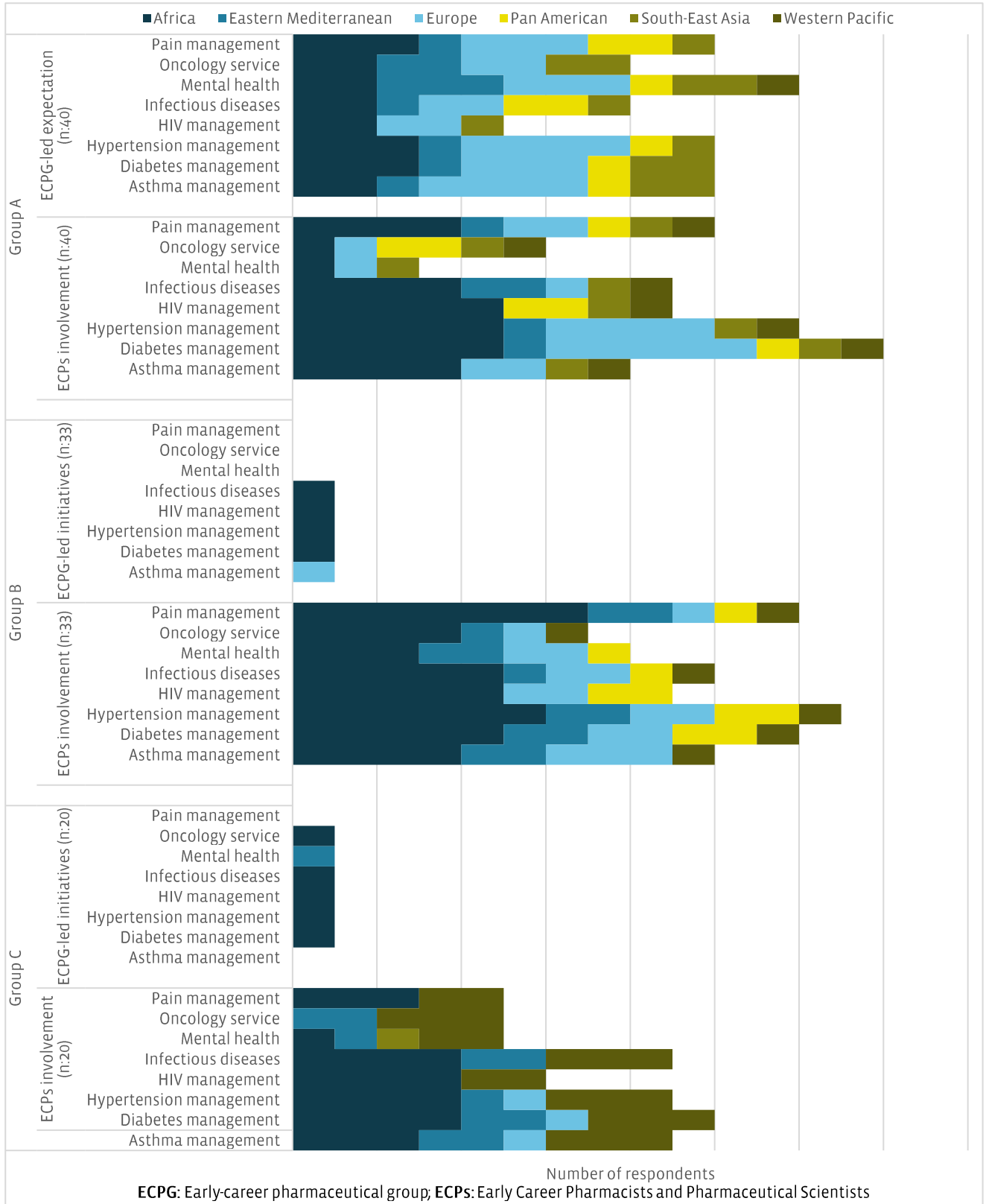


Figure 31. Involvement of ECPs and ECPGs in condition-specific services across regions

Looking at the condition-specific services, diabetes management, hypertension management, and infectious diseases were categories where ECPs provided services across at least five regions. Diabetes management and hypertension management may have more involvement in the African and European regions. HIV management also involves a greater portion of ECPs in the African region. This may be due to the higher impact of HIV in the region compared with other regions. In Africa, Eastern Mediterranean, Europe and Western Pacific regions, ECPs are also involved in asthma management, according to all responders. Mental health is the topic in which fewer young professionals are involved across all regions.

Regarding ECPG involvement in these condition-specific services in Africa, Europe and South-East Asia, individuals without an ECPG in their country (Group A) expect ECPGs to be involved in all the services. HIV management is not a service in which individuals in America, Eastern Mediterranean and Western Pacific regions expect ECPGs to lead initiatives. Across all regions, and especially in Europe and the Eastern Mediterranean, individuals expect ECPGs to lead initiatives in mental health, but only one organisation from Lebanon reported that it currently leads initiatives in this area.

Africa

In the open response section, an individual (Group A) from Tanzania provided several examples for the potential involvement of ECPGs in leading condition-specific services, such as creating standard operating procedures for asthma, diabetes, hypertension and HIV management, developing campaigns for awareness about different infectious diseases, developing guidance for community pharmacists to function as mental health first aiders, increasing awareness about the provision of oncology services by pharmacists and creating a standard operating procedure for pain management. Regarding hypertension monitoring and management, an individual (Group A) from Uganda believes ECPGs should develop and disseminate this service, especially in community pharmacies because these have the highest pharmacist-patient interactions. This individual also stated that the development of mental health information materials to reduce mental health stigma should also be a focus for ECPGs. Concerning oncology services, individuals expect ECPGs to develop safety guidelines on using personal protective equipment (PPE) when reconstituting and administering chemotherapy.

On the other hand, an organisation (Group C) from Algeria stated that its main focus is on education programmes in order to enhance the capabilities of young pharmacists in terms of scientific background and technical knowledge, soft skills development (leadership, teamwork, communication), awareness campaigns for public and professionals, and media and communication for the promotion of health and other activities.

The organisation from South Africa does not have any initiatives related to the referred topics but has other projects, such as its “YPG professional innovation project” to encourage innovation in pharmacy, a “Mentorship pilot programme”, where mentors and mentees have to commit to a one-year mentorship journey, and a “Recruitment project” to identify representatives of each province.

Eastern Mediterranean

Individuals expect ECPGs to be involved and lead initiatives in every area except HIV management. From all the disease-specific areas, only the organisation from Lebanon leads some initiatives in mental health.

Regarding condition-specific services provided by ECPGs, an individual (Group B) from Lebanon reported some examples of what is being done in the country. This includes helping asthma patients understand their condition and also provide them with information about the procedures they should do to manage their disease. Also, they are educating diabetes and hypertension patients about their conditions and providing information about how to manage these diseases using non-pharmacological and pharmacological therapies. On the issue of mental health, it provides sessions for mental health management. Pain management services are also provided by pharmacists.

Besides these initiatives, organisations provided other examples. For example, in Lebanon, the ECPG updates its members on social media about new Food and Drug Administration (FDA) approved drugs, organises social events for members, and reaches out to coaches and international speakers to participate in events and give lectures. It also attempts to facilitate friendships and leadership opportunities to help shape the next generation of pharmacists. In Pakistan, the ECPG is currently “working on legislative issues with the federal and provincial government to make the presence of a pharmacist mandatory in small cities”.

Europe

ECPs provide all the condition-specific services in the region, especially asthma management, diabetes management and hypertension management. Besides these, 38% of the responders from the region also

expect ECPGs to have initiatives on mental health. Individuals (Group A) expect ECPGs to lead initiatives in every topic, although according to one individual (Group B) from Portugal, the ECPG already leads initiatives in asthma management.

Pan-American

In the Pan-American region, ECPs are involved in all services except asthma management, although individuals do expect ECPGs to be involved in it. Individuals do not expect ECPGs to be involved in HIV management or oncology services. No initiatives were highlighted by respondents in the open text section.

South-East Asia

In the South-East Asia region, individuals expect ECPGs to lead initiatives on every topic. Forty per cent of respondents indicated that they expect initiatives to be led in asthma management, diabetes management, mental health and oncology services. The organisations in the region that responded (India and Indonesia) currently do not provide any of these services. The organisation from India, the India Pharmacy Graduates’ Association Student Forum, develops other activities to empower young students and strengthen public healthcare.

Western Pacific

In the Western Pacific region, ECPs are involved in all the condition-specific services. However, the smallest proportion of respondents indicated being involved in mental health. Interestingly, only a single individual from Malaysia expected ECPGs to lead initiatives in mental health.

3.5.5 ECPG initiatives, activities and engagement

3.5.5.1 ECPG activities

General findings

Figure 32 summarises ECPG activities selected by each group of respondents.

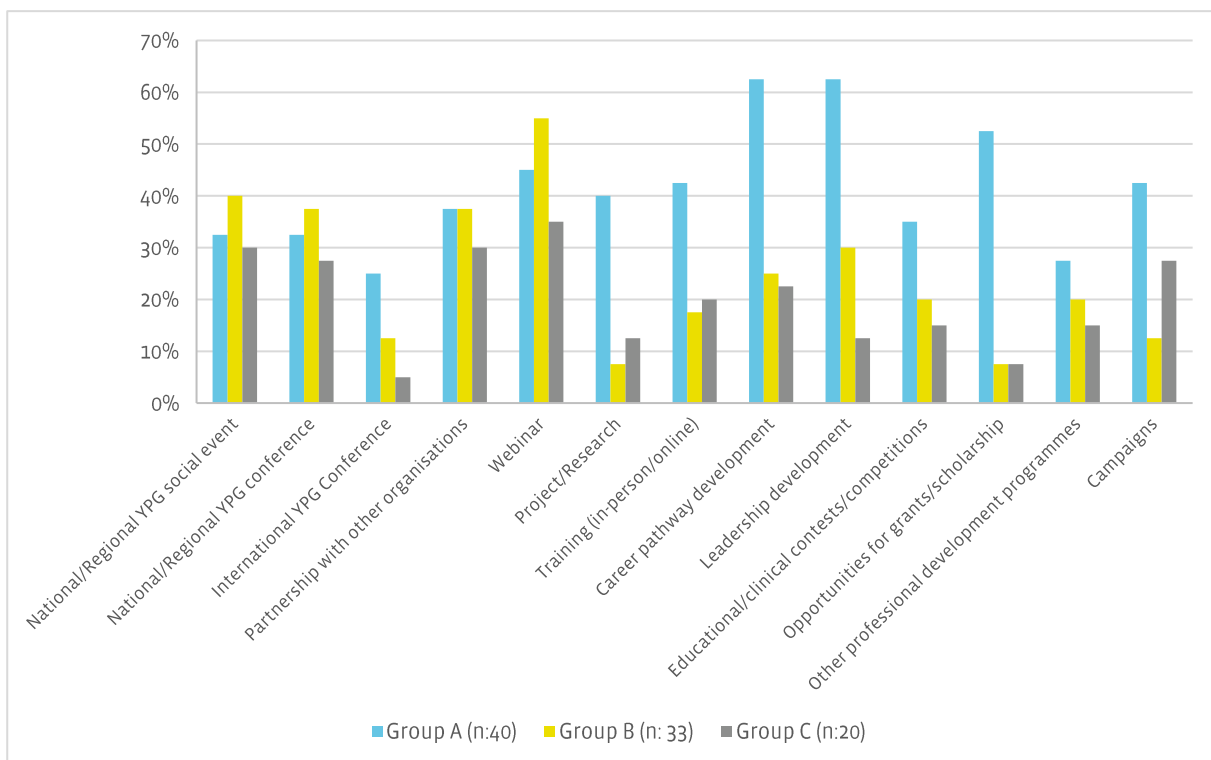


Figure 32. Summary of ECPGs activities selected by respondent groups A, B and C across regions

More than 50% of respondents in Group A expected ECPGs to conduct activities related to opportunities for grants/scholarships, leadership development and career development. However, these priority activities differ largely from those mentioned by Group B and Group C (organisations). These individuals more frequently indicated a preference for career and skill development activities and opportunities for scholarships and support. This may indicate that countries without an ECPG also lack career development support and financially supported learning opportunities. Future ECPG established in these countries should consider these areas a priority to address the needs of individuals. Similarly, while 40% of respondents in Group A highlighted a need for ECPGs to organise projects/research, only around 10% of ECPGs organised this activity, which could be an opportunity for ECPGs to promote advocacy of evidence-based research.

More than 50% of respondents in Group B (individuals who have ECPG in their countries) highlighted that the current activities conducted by ECPGs were webinars. This was in line with Group C (organisations) findings, where more than 30% of organisations stated that they conducted a webinar. Also, more than 30% of respondents in Group B stated that ECPGs organised social events and partnerships with other organisations. This was also highlighted by 30% of respondents in Group C, suggesting that their members also noted activities that ECPGs have been doing. Interestingly, organisations indicated they are involved in campaigns more frequently than was identified as a necessary activity by individuals with and without an ECPG. This may be due to organisations having a greater understanding of the importance of policy and advocacy compared with what is understood and valued on an individual level. Organisations may want to consider the type of campaigns they are running and how they meet the needs of their individual members to ensure that their efforts are meeting a genuine need.

Only 5% of respondents in Group C (organisations) organised an international YPG conference. This may be an opportunity for the FIP YPG to further explore collaboration with national and regional ECPGs and expand its network of young pharmacists and pharmaceutical scientists.

Across regions

Figure 33 summarises ECPG activities selected by each group of respondents across regions.

In the African region, individuals considered all of the listed activities as important. At least one ECPG was attempting to deliver these activities, except for international YPG conferences. Similar responses are also seen in other regions with partnership and collaboration and webinar activities being selected as necessary by individuals and being delivered by organisations, but international YPG conferences only being delivered by one South-East Asian (Indonesia) and one Western Pacific (Japan) organisation.

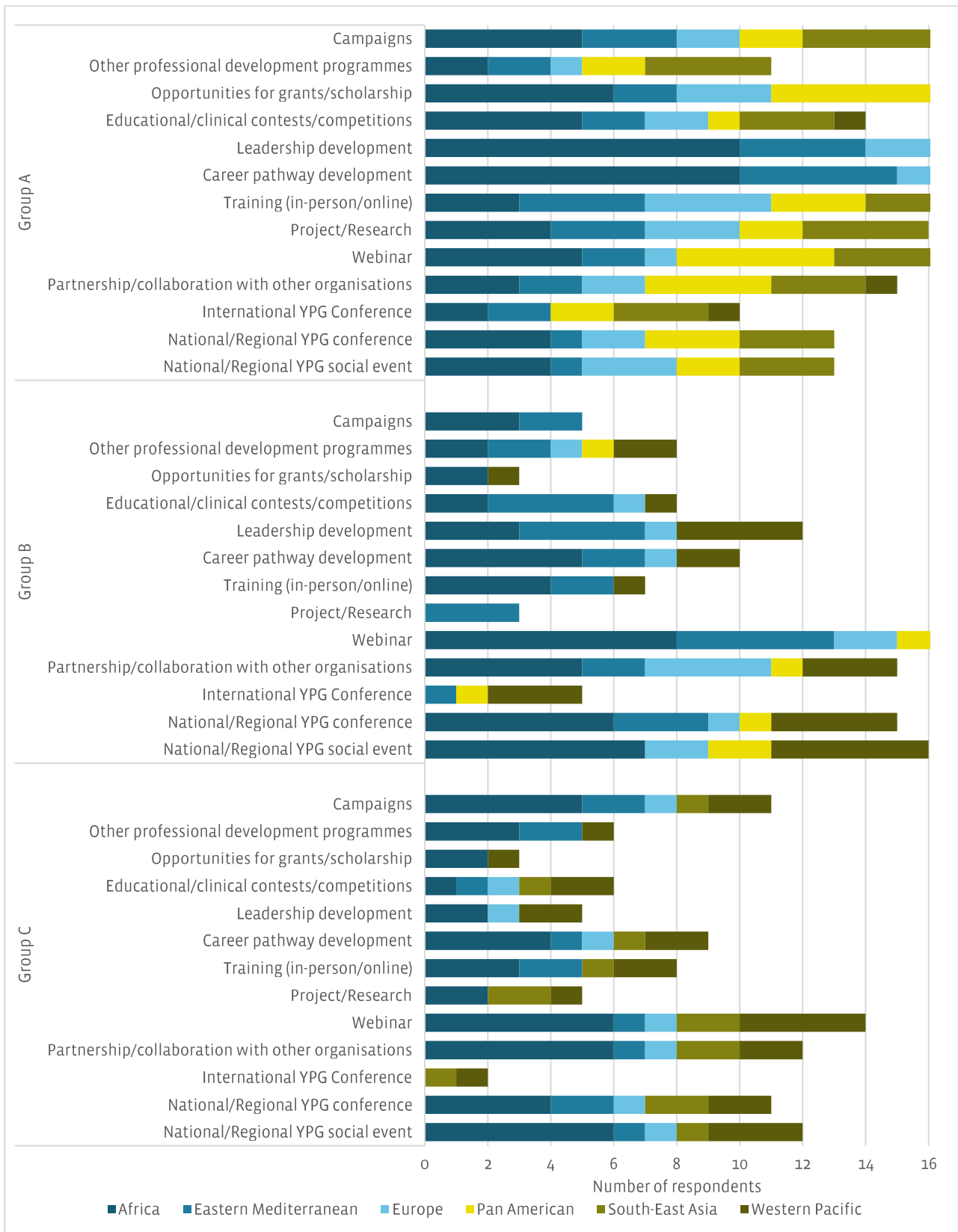


Figure 33. Summary of ECPG activities selected by respondent groups A, B and C across regions

Africa

In terms of national/regional YPG social events, organisations in Africa described this as a “YPG evening” happening during their annual conferences, for example, in South Africa, Ghana and Nigeria. There were also

social events that included social media updates and interactions among young pharmacists and pharmaceutical scientists in Africa. In Mauritius, ECPGs organised recreational activities for members to get to know each other.

Many ECPGs in Africa organised national and regional YPG conferences; for example, in Algeria, Kenya, Nigeria. Sometimes during conferences, they also organised programmes for leadership and professional development.

In terms of partnership and collaboration, the ECPG in Nigeria highlighted that it currently partners with health institutions, regulatory bodies, pharmaceutical companies and non-governmental organisations to arrange programmes that will benefit young pharmacists in Nigeria. These include the NAFDAC YADA (National Agency for Food & Drug Administration Control Youth Against Drug Abuse) programme which aims to educate the populace on drug abuse and misuse, and the GSK-Young Pharmacists mentorship programme. In Tanzania, the ECPG collaborated with the medical students' association and the pharmaceutical students' federation.

In terms of webinars, while individuals in group A expected ECPGs to facilitate webinars, many ECPGs in Africa have in fact conducted and organised them. Topics included: (i) awareness of and prevention against COVID 19 (Algeria), involvement of pharmacists in the fight against COVID 19 (Cameroon) and adaptation of pharmacy practice to COVID 19 (Nigeria); (ii) policy, politics and governance related to the role of pharmacists and stakeholders in 21st-century pharmacy practice (Nigeria); (iii) digital economy and healthcare — roles of pharmacists and stakeholders in the pharmaceutical industry and community practice (Nigeria); and (iv) into data science and analytics with opportunities for pharmacists.

Many campaigns have been organised by ECPGs, for example, campaigns related to World Health Day, World Pharmacists' Day, World Hepatitis Day and antimicrobial resistance campaigns.

In Uganda, individuals expected grant support for young pharmacists and pharmaceutical scientists. In Tanzania and Uganda, they expected ECPGs to connect young pharmacists with both national and international mentors for career development. Individuals in Tanzania also highlighted their expectations related to having any informal event that can bring together young pharmacists from across the region or within the country together, which could be a casual “happy hour” and could be physical or virtual.

Eastern Mediterranean

In Lebanon, a national conference is usually organised with various topics and competitions where the general assembly of the association also occurs. The ECPG is also involved in a regional conference hosted by the International Pharmaceutical Students' Federation.

In terms of partnership and collaboration, the Lebanese Pharmaceutical Students Association has a good relationship with the Order of Pharmacists in Lebanon, the Ministry of Public Health) and the Lebanese Red Cross. It started a COVID-19 campaign with the Red Cross along with other student organisations of healthcare providers. It also has a regular collaboration with the Lebanese Medical Students International Committee and the Lebanese Nursing Students' Association. The ECPG in Lebanon has organised webinars related to public health topics, pharmacy education and professional development, for example, gaining patients' trust through intelligent communications, body language for video conferencing, patient counselling and empathy, the three Rs of resilience, and artificial intelligence's emergence into pharmacy, among others.

Many campaigns have been organised by the ECPG, for example, topics related to public health and pharmacy education campaigns, HIV awareness campaigns, cancer campaigns, mental health campaigns, HIV awareness campaigns, etc.

Europe

In Portugal, the ECPG conducted social events via “Google Hangouts”. Individuals from Poland and Turkey highlighted that the ECPGs in their countries have a partnership with the European Pharmaceutical Students Association and the International Pharmaceutical Students' Federation. The ECPG in Portugal has a partnership with university and pharmacy organisations, which was also highlighted by individuals in Ukraine.

Pan-American

In Canada, individual respondents expected ECPGs to organise a national conference.

South-East Asia

In India and Indonesia, the ECPGs organised a national conference annually. The Indonesian YPG discussed its involvement in organising the international YPG conference. In India, the ECPG detailed that it collaborated with pharmaceutical companies.

The ECPG in India discussed some webinars that it organised, including a CV writing workshop, transforming global health, the role of pharmacists in society, mental health and modern pharmacy practices.

It is interesting to see that the ECPG in India organised many competitions for its members, such as a national blog competition, a national research project competition, a hackathon, a poster making competition, cultural activities, a drug label making competition, poster presentation, and a research paper competition.

The ECPG in India also organised various industrial visits for students to pharmaceutical industry sites.

Western Pacific

Like ECPGs in Africa, the ECPG in Australia organised social events through a networking event as part of the national conference. In the Philippines, the ECPG organised a YPG night. The ECPG in Singapore organised a networking and exercise-related event. In Malaysia, the ECPG organised an annual retreat and teambuilding.

ECPGs in the Philippines, Singapore, Malaysia and Australia highlighted their national/regional YPG conference activities. There are annual therapeutic updates in Australia, in which education and training programmes are delivered annually over a weekend in most Australian states and territories. This is then teamed with the respective Australian state's awards night and networking. The ECPG in Australia also organised online support for members and "speed dating" nights at which ECPs and students can discuss career pathways with pharmacists practising in a diverse range of industries. In Malaysia, the ECPG organised four different types of symposium as follow: (i) Malaysian Innovative Healthcare Symposium (health technology and innovation focused); (ii) Malaysian Clinical Pharmacy Symposium (clinical pharmacy focused); (iii) Malaysian Community Pharmacy Business Forum (community pharmacy focused); and (iv) Pharmaceutical Industry Pharmacists Insights (industrial pharmacy focused).

Since there is a regional ECPG in the Asia Pacific, many ECPGs, such as those in Singapore and Japan, mentioned that they collaborated with the Asian YPG. The ECPG in Malaysia mentioned that it partnered with Kemin Human Nutrition to drive a greater understanding of community pharmacists towards the benefits and studies behind lutein and zeaxanthin. Apart from that, it also partnered with hospitals, professional societies and corporations for technical support of their initiatives (content, venue, co-branding and speakers).

In terms of webinars, the ECPG in Australia highlighted some specific topics related to palliative care, glaucoma, opioid replacement pharmacotherapy, COPD, diabetes, asthma and wound care. It also organised a webinar showcasing pharmacist career pathways (including politician, community, hospital, professional organisation, accredited pharmacist, Aboriginal health service, etc.). The ECPG in Australia also organised some awards as recognition for those who contributed to the profession: "State awards — Early Career Pharmacist of the Year" (state-based and then an overall national winner).

The ECPG in Japan highlighted its collaboration with the Asian YPG in organising webinars related to situation/treatment for COVID-19, telepharmacy and career paths.

The ECPG in Malaysia mentioned its national project focusing on advocacy, people and organisation, public perception and pharmacist development. Related to the career development programme, it highlighted its forthcoming programme called "MPS YPC Career Empowerment Dialogue" which will connect young pharmacists considering a career switch to seniors from different sectors. It is also involved in the BIG-I competition by the Malaysian Innovative Healthcare Symposium that explores innovative and technology-driven ideas to improve health.

3.5.5.2 Group engagement

General findings

Figure 34 summarises group engagement activities selected by groups B and C of respondents. Group A respondents were not asked this question.

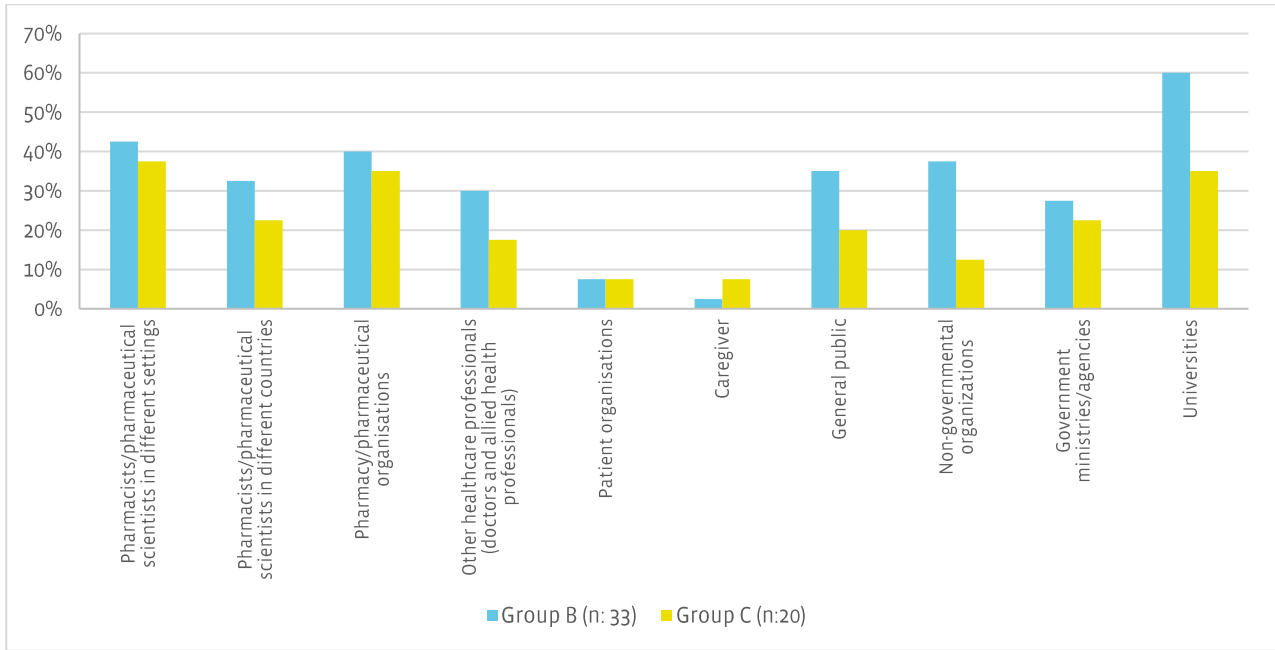


Figure 34. Summary of ECPG activities selected by respondent groups B and C

More than 30% of ECPGs engaged with pharmacists and pharmaceutical scientists in different settings, pharmacy and pharmaceutical groups, and universities. This pattern was also similar to the awareness of individuals in Group B, in which more than 50% were aware that ECPGs in their countries engaged with universities. There was less engagement with caregiver and patient organisations, which can be seen as opportunities for ECPGs to be more engaged. Interestingly, while individuals were aware that ECPGs in their countries were engaged with non-governmental organisations and the general public (more than 30% of them), less than 20% of organisations had been engaged with these group categories.

Across regions

Figure 35 summarises group engagement activities selected by groups B and C of respondents across regions.

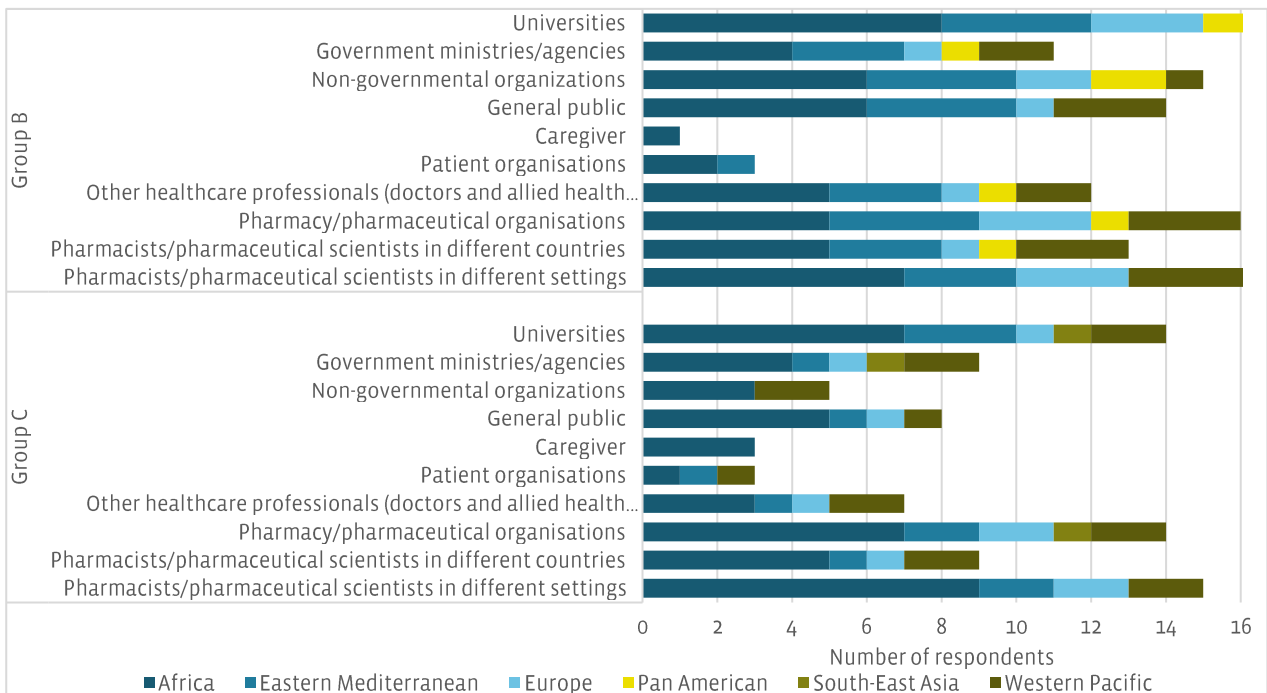


Figure 35. Summary of group engagement selected by respondents' groups B and C across regions

Africa

ECPGs in Africa have been engaged with all group categories. It is interesting to see that individuals in Nigeria were generally aware of all the groups that the ECPG engaged with, except for patient organisations. The respondents highlighted that the engagement was conducted through collaborative webinars and mentorship programmes, collaborative campaigns for increasing awareness in Nigeria and Tanzania, and collaboration in certification courses (with a university). The organisations highlighted some engagement with different settings by advocating better practice, such as in Cameroon, collaboration to draft new guidelines related to the scope of practice of profession, such as in Mauritius. Also, collaboration with other healthcare professionals encourages professional collaboration and relationship by ECPGs in Nigeria, engaging with the general public through social media by ECPGs in Nigeria, and supporting pharmacy students for internship by ECPGs in South Africa.

Eastern Mediterranean

ECPGs in the Eastern Mediterranean region have been engaged with all group categories except for caregiver. Interestingly, individuals in Lebanon believed that the organisation engaged with multiple groups when it did not report doing so. The countries in this region may need to consider making the purpose and activities of ECPGs clearer to those outside of their immediate executive committees. The ECPG in Lebanon mentioned its engagement in public health campaigns and projects with other organisations. Individuals also highlighted their connection through the International Pharmaceutical Students' Federation and other healthcare students' professions. They also engaged with ministries of public health, ministries of education, and ministries of environment to support their campaigns. The ECPG in Pakistan highlighted its engagement with government ministries to advocate the presence of pharmacists in healthcare settings.

Europe

ECPGs in Europe have been engaged with most categories except for caregiver and patient organisations. The ECPG in Portugal discussed its engagement in a campaign through social media for the public and establishing a protocol for the benefit of its members.

Pan-American

The ECPGs in the Pan-American region have been engaged with most categories, except for the general public, caregiver, patient organisation and pharmacists in different settings. In Argentina, the ECPG engaged with universities, non-governmental organisations and government; in Brazil, it engaged with universities, non-governmental organisations, pharmacists in different countries and pharmacists' organisations. In the USA, however, it only engaged with other healthcare professionals.

South-East Asia

In India, the ECPG only engaged with pharmacy/pharmaceutical groups, government ministries and universities. There were no responses obtained from the ECPG in Indonesia.

Western Pacific

In ECPGs in the Western Pacific region, it seems there was some disconnect between whom individuals believe ECPGs engaged with versus what was reported by the organisations. For example, in Australia and Malaysia, there are multiple groups that the organisation engages with that individual did not recognise.

With pharmacists from different countries, the ECPG in Australia supports the initiative of the Pharmaceutical Society of Australia (PSA), which has partnered with pharmacists in Papua New Guinea to deliver education and other benefits. On the other hand, the ECPG in Malaysia highlighted its collaboration with the Asian Young Pharmacists Group (AYPG) and Federation of Asian Pharmaceutical Associations (FAPA). The ECPG in Australia, through the PSA, worked with other pharmacy stakeholders to consult on the development of guidelines, standards, codes and protocols, to partner on projects of mutual benefit, and to co-host some events.

The ECPG in Malaysia mentioned its collaboration with other healthcare providers as it is part of the Malaysian Health Coalition through its parent organisation and has actively disseminated crucial health information from it during the pandemic. With the general public, it highlighted its initiative, "*Sihat4U*", as its dedicated channel to engage the general public on health education. With non-governmental institutions, the ECPG in Malaysia mentioned they have organised a cross-talk series with the Malaysian Institute of Accountants (MIA).

With governments and agencies, the ECPG in Australia, through the PSA, worked closely with state and federal government departments and politicians to promote pharmacists, particularly in relation to current priorities of pharmacist-administered vaccination and medicine safety. The ECPG in Malaysia mentioned its active engagement with the Pharmaceutical Services Programme of the Ministry of Health (MoH) to champion the interest of young government pharmacists. With universities, the ECPG in Australia, through the PSA as the professional organisation for pharmacists, speaks to students undertaking pharmacist studies. The PSA also partners with lead academics in developing and promoting work on medicines safety. The ECPG in Malaysia said it has worked closely with a handful of universities for their conferences and reached out to future young pharmacists.

3.6 Strengths and limitations

This survey is the first global study exploring the expectations and involvement of young pharmacists and pharmaceutical scientists in global health. It is also the first global study exploring the activities conducted by national and regional ECPGs.

One limitation of the study is that the survey was conducted only in English. There is a possibility that the questions may have been misinterpreted by participants in countries where English is not the first language. Also, the topic might be new for pharmacists, which may affect their knowledge and how they answered the survey. Any inaccurate information that the respondents provided may have affected the accuracy of the results. There was a low completion rate of the survey, which might be because respondents were not interested in the topic or were not sure about how to complete the survey.

Another limitation was that the data collected could be viewed as being subjective. This type of data is not fact-checked and relies on the knowledge and awareness of the respondents about the activities of other ECPs in their country and of the ECPGs. There is a possibility that respondents were members of an ECPG and identified in Groups A and B; however, they were not representatives of the ECPG and may not possess full knowledge of ECPG activities in their countries. Therefore, there could be a risk of under-representation of the data in this study. Further studies would be helpful to obtain data from ECPGs more officially.

The survey covered respondents across the six WHO regions. However, there was a skewed distribution in some regions across categories. Similarly, the survey sample size was small. There is a possibility of over-interpretation of results and conclusions, and this limits the generalisability of the findings.

Chapter 4. Case study examples of the role of early-career pharmaceutical groups in global health

Existing early-career pharmaceutical groups (ECPGs) have actively contributed to global health during the COVID-19 pandemic by addressing the different needs in their communities and countries. They have rapidly been required to switch from online activities to advocacy and emergency projects. With the COVID-19 pandemic, some of these organisations have directed health campaigns. In contrast, others have directly contacted vulnerable individuals, using different approaches and reaching different results.

The case studies in Chapter 4 describe a set of example activities completed in different global regions. They highlight activities related to advocacy, COVID-19 response, and emergency preparedness/response. They showcase different approaches to dealing with the pandemic and the original mission and vision of the ECPGs responsible for them.

While ECPGs demonstrate an active hands-on approach to the different issues in their countries, they also undertake important work regarding advocacy on pharmacy and youth subjects, considering their role in the profession and beginning of their careers, but also on their vision for the future of pharmacy and how the youth is and will be included in this context. Moreover, while their work and leadership impact their locations, countries and regions, we also observe that the majority of those young pharmacists are part of FIP and FIP YPG as individual members, and the ECPGs also participate on the global network organised by FIP YPG.

4.1 Pharmaceutical Society of Nigeria Young Pharmacists' Group (African region)

COVID-19 and hepatitis-B awareness campaign			
Authors	Emmanuel Oluwagbade, Oguns Yimika, Nwadinaru Osele, Dasola Ojeleye, Wilson Ukeme, Chiamaka Ngene, Ethel Mba	Themes	COVID-19 campaigns, non-COVID-19 campaigns, advocacy, emergency response
Background and context			
<p>On 11 March 2020, the COVID-19 outbreak was declared a global pandemic. The first reported case of the virus in Nigeria was documented on 27 February 2020. The WHO described it as the most challenging pandemic the world has ever encountered and declared the COVID-19 outbreak a public health emergency of international concern.</p> <p>The use of masks and regular washing of hands with soap and water or alcohol-based hand sanitisers were among the stated precautions laid down by the WHO. However, the unnecessary high cost of hand sanitisers and masks due to high demand from people and the low supply due to closed borders and ports that halted importation made this personal protective equipment (PPE) very scarce and unaffordable for the most vulnerable people in Nigeria.</p> <p>The Pharmaceutical Society of Nigeria Young Pharmacists' Group (PSN-YPG) felt the need to educate the middle and low socioeconomic classes in selected communities in Lagos (the epicentre of the pandemic in Nigeria) about the novel coronavirus and how to stop it from spreading.</p> <p>There was also a need to provide the selected communities with hand sanitisers, since many residents could not afford them due to the high cost.</p> <p>As the year progressed and cases increased, it became imperative also to educate members of the public about other deadly infections aside from COVID-19. In addition to online social media campaigns, the PSN-YPG organised a campaign on vaccine-preventable diseases, with a focus on hepatitis-B. This was done in different communities in Lagos in partnership with community pharmacies, which are the first port of call for most patients in Nigeria, and Emzor Vaccines, a leading pharmaceutical company in Nigeria.</p>			

The campaign was scheduled for 28 July 2020, which was World Hepatitis Day. It was directed at creating awareness and encouraging individuals and the general public on the importance of getting tested, vaccinated, treated and preventing the spread of the disease.

This is in line with the objectives of PSN-YPG to participate in public health projects locally and globally and to develop its members, such as early career pharmacists, who can act as agents of positive change at local, national and international levels.

Case description

With the impact of the COVID-19 pandemic in Nigeria, the PSN-YPG carried out a COVID-19 awareness campaign with the distribution of hand sanitisers to vulnerable populations in Somolu, in partnership with a local NGO (Dr. Chigbo's Foundation). The campaign was structured to provide awareness on COVID-19, educating the community on the myths of the COVID-19 virus as well as personal and collective preventive measures.



Promotional poster for donations

About 1,000 bottles of hand sanitisers were produced by young pharmacists in line with the WHO formula, and distributed to members of the community. Additionally, flyers and information leaflets on COVID-19 were printed to serve as aids in easy communication, and the information was read out in the local languages. This project took place in three communities within the Somolu local government area in Lagos state, which has some of the major vulnerable population in Nigeria.

During World Hepatitis Day, the PSN-YPG carried out another campaign to create awareness on the theme “Hepatitis-free future”. This was carried out in partnership with Emzor Pharmaceuticals (Vaccines) and was conducted in 17 community pharmacies across 10 communities in Lagos.

Questionnaires were distributed to the participants prior to the vaccination to assess their level of knowledge on hepatitis, its transmission and management. The participants were educated first, screened, counselled and were later vaccinated against the virus if they had a negative result. Participants with positive results were referred to hospitals for full follow-up.

The test kits were provided free of charge by Emzor Vaccines, which also provided the hepatitis-B vaccines used for the activity, in addition to the essential team needed for the testing and vaccination.

The community pharmacies helped with cold storage and subsequently gave the three courses of the vaccines at a discounted price; hepatitis-B vaccination is a three-course immunisation process.

In order to ensure cooperation of the communities, the project was announced before the day and banners were also placed in strategic locations. At the end of the day, over 1,000 people were reached in total via the information sharing, counselling, free testing and vaccinations.

The volunteers were young pharmacists who were taken through an orientation before the campaign's days. The personnel who participated in testing and counselling included the volunteers, pharmacists in the partner pharmacies, and attached nurses.

Outcomes, lessons learned and recommendations

COVID-19 health campaign

Considering the global impact of COVID-19, it became paramount to create widespread awareness and sensitisation about preventive measures to curb the spread of the virus.

The outreach organised in Somolu reached out to the middle and low socioeconomic classes, who were then educated on basic preventive measures.

Young pharmacists produced the sanitisers (about 1,000) that were used in line with WHO guidelines, thereby eliminating the high cost of purchasing sanitisers and further strengthening their professional competencies. Also, over 150 families in these communities were given staple food items as in addition to the hand sanitisers. This helped to reduce some of the burden of the nationwide lockdown on these families that could not provide for themselves.

Some hand sanitisers were also distributed to essential workers, such as the policemen and pharmacists who were on duty in those communities and surrounding areas.

One major lesson learnt from the outreach is that to achieve health equity, especially during a pandemic, the members of the middle and low socioeconomic classes need to be reached. Their status in society puts them in a disadvantaged position, which can be detrimental to the health status of society.

Non-COVID-19 health campaign; World Hepatitis Day awareness campaign

Considering the global threat of hepatitis on public health, the outreach was organised in partnership with Emzor Vaccines and 17 community pharmacy outlets in 10 communities across Lagos State, Nigeria. This increased the public's knowledge on hepatitis-B, which will ultimately prevent new infections and curb further transmission of the virus.

Over 1,000 participants were reached via screening, health education and vaccination. The screening and vaccination also promoted interprofessional collaboration because nurses participated in the vaccination exercise.

New diagnoses were made because some of the screened participants tested positive, and such participants were referred to appropriate institutions for further care and treatment.

The outreach also imprinted in the minds of participants how accessible pharmacists are for adequate health information and education, which will ultimately increase the professional value of pharmacists. Hence, it is strongly recommended that community pharmacy outlets participate more in providing professional health education via health awareness campaigns.

Pharmacists were also among the vaccinators, which increased awareness about the need for pharmacists to embrace immunisations and pharmacies as vaccination centres.

4.2 Lebanese Pharmacy Student's Association (Eastern Mediterranean region)

Preparedness in times of crisis

Authors	Ismail Jomha, Layla Abounassif	Themes	COVID-19, emergency preparedness
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Background and context

The Lebanese Pharmacy Students' Association (LPSA) is a member organisation of the International Pharmaceutical Students' Federation (IPSF). It aims to raise public health awareness, unify pharmacy students all over Lebanon, and raise awareness and increase the social value of the pharmacy profession.

The LPSA organises events in multiple portfolios such as public health, professional development, pharmacy education, policy and advocacy, interprofessional engagement, pharmaceutical services and training. As prospective healthcare professionals, it is our duty to be able to contribute to situations of pandemics and disasters. Although one might argue that both events have rare chances of happening, the LPSA believes that proactivity is necessary to tackle any issues.

The focus of this case study will be on our response to the COVID-19 pandemic and the emergency preparedness and response during the explosion that happened in Beirut on 4 August 2020.

Case description

In March 2020, the Lebanese government declared a complete lockdown after discovering several cases of COVID-19. Right after this decision, the executive committee of LPSA called for an urgent meeting to discuss our role to help in this pandemic. Luckily, we had discussed possible strategies of our readiness in times of crisis, even months before the pandemic, so this helped us move faster with the response. After the meeting, we contacted our health partners in Lebanon and offered our services.

An immediate response was required, so the LPSA participated in multiple training sessions held by the Ministry of Public Health (MOPH), the Ministry of Education, the WHO Lebanon Office, the Lebanese Red Cross and the Lebanese Medical Students International Committee. After training, LPSA members served as COVID-19 awareness promoters in all regions of Lebanon, providing awareness campaigns and seminars to municipalities. Furthermore, a response team was dedicated to helping the MOPH with data entry and COVID-19 tracking. Another team was responsible for raising awareness on our social media platforms. Also, to widen the scope, a team remained updated with new recommendations provided by the WHO and the Centre for Disease Control and Prevention (CDC), and, in return, shared the updates with our members. In addition, some of our members served as field officers in some municipalities to assure COVID-19 safety measures were being applied according to the recommendations of the MOPH, the WHO and the CDC. Even now, with the COVID-19 vaccination clinics in Lebanon, our members are involved in preparing the vaccines. So, we believe that we exerted our efforts fully by seizing every opportunity to be a helping hand in the COVID-19 response.



Training session participants

On 4 August 2020, Beirut was hit by one of the world's most destructive explosions, which destroyed the heart of our beautiful capital city. An emergency meeting of LPSA's executive committee was held. After the meeting, our three rescue teams were ready to help with this disaster. One team volunteered to remove the damage from the affected area. The second team collaborated with other NGOs to supply medicines to those affected by the explosion. The third team was counselling other volunteers at the explosion site about COVID-19 measures. Our preparedness in times of emergency was of great value and impact, along with the efforts of many other NGOs that remained in the field for over one month to remove the damage.

Outcomes, lessons learned and recommendations

It can be surprising how much we can provide to our community. It is through experience that we realise our true readiness. Although pandemics and disasters do not occur regularly, we still need to be ready in case they do. In such situations, immediate actions are required to save as many lives as possible.

We strongly recommend health-related institutions develop a set of proactive strategies that would be helpful in times of crisis. Furthermore, helping the MOPH and other medical teams in clinics and hospitals during this COVID-19 pandemic is needed.

The pandemic has exhausted medical teams all around the world. If health-related associations put their efforts into having a COVID-19 response team available to assist the health sector, this would decrease the pressure on the medical team. No matter how small or big the impact may be, it still matters.

4.3 Portuguese Young Pharmacists' Association (European region)

White Book — Young Pharmacists' 2030 Vision

Authors	Catarina Nobre, Manuel Talhinhos, Margarida Gaião, Regina Dias	Themes	Advocacy, policy, vision
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Background and context

The current Portuguese Young Pharmacists' Association (APJF) board was elected to an organisation with the motto "For young pharmacists, in favour of society". As such, one of the main goals of its mandate was to create a vision for 2030 that young pharmacists own and advocate, not only with topics related to the pharmaceutical sector but also through some reflections that can impact the health ecosystem and Portuguese citizens.

While creating this vision, it was important to include as many active participants as possible, to take the opportunity to build a stronger engagement with APJF's members and to raise the interest in the association's initiatives and policy.

As pharmaceutical youth's representatives, it is important to voice concerns and to present recommendations on the topics that may or will impact the future of the profession.

Case description

The APJF has planned and implemented an initiative entitled "White Book — Young Pharmacists' 2030 Vision", an official document that presents the challenges that young pharmacists and the profession face and recommendations on how to overcome them, as a long-term policy guidance.

After a powerful social media campaign to engage more participants in the initiative, the APJF officially launched the initiative through an online reflection forum in November 2020, open to members and non-members of the association. It achieved the active participation of about 50 young pharmacists. Participants shared their thoughts on what should be the main priorities for the decade, and a dynamic exercise led to a word cloud in which the most

emphasised words to describe young pharmacists in 2030 were “multidisciplinary”, “dynamic”, “integration”, “innovative”, “informed” and “leadership”.

From the brainstormed discussion, eight topics were selected for the White Book:

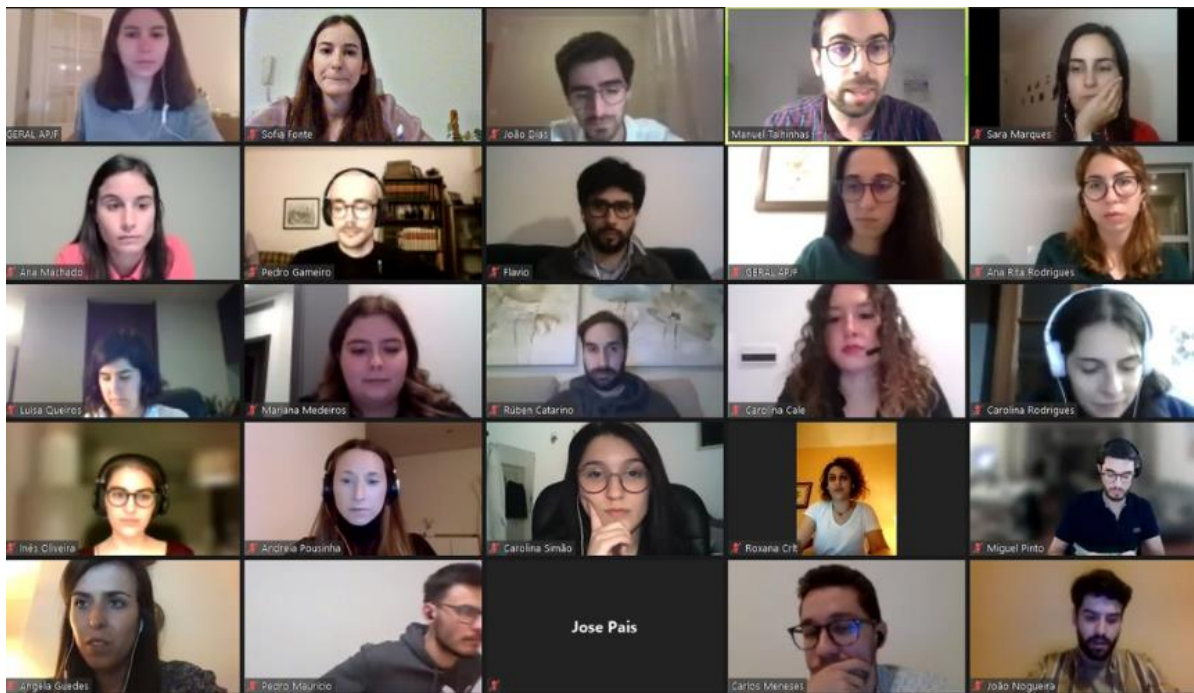
1. Digital health and technological transformation of healthcare;
2. Strengthening and integration of pharmaceutical intervention at all levels of care;
3. Contribution in the creation of real-world evidence and health decisions;
4. Inter-collaboration with other healthcare professionals and other pharmacists;
5. Rethink the education, training and regulation of the profession;
6. Proximity and pharmacy services within the community;
7. Access to medicines and innovation; and
8. Citizen’s health and literacy promotion.

The next step was to create eight working groups that would specifically dedicate to work on each topic. Therefore, the APJF board made an online form available for young pharmacists to register and show their preference regarding the eight topics.

All the working groups gathered six to nine interested young pharmacists, and quickly the online meetings started to take place. Each APJF board member was responsible for facilitating and managing one working group according to the proposed planning and timeline for meetings:

- **Meeting 1:** Introduction, presentation of the initiative and timeline, exchange of expectations
- **Meeting 2:** Invited expert on the topic, Q&As and the first draft of the paper
- **Meeting 3:** Invited patient advocate, Q&As and continuation of paper drafting
- **Meeting 4:** Conclusion of the paper

Each working group was free to adjust the number of meetings, their order and dynamics, depending on what suited better the participants and experts invited.



“White Book” online presentation session

As soon as the eight working group papers are finished, there will be a final meeting with the more than 60 young pharmacists that were included the working groups to present the result of each paper and to evaluate the initiative and its process.

Finally, a national and international presentation of the White Book is planned, gathering pharmaceutical, health and society stakeholders, in order to present and advocate the position of Portuguese young pharmacists in the eight topic areas.

Outcomes, lessons learned and recommendations

As the representative of young pharmacists throughout Portugal, the APJF strives to promote issues that may impact the profession and its future. To proactively act on policy is equally important to the reactive position, so the “White Book — Young Pharmacists’ 2030 Vision” brings to the table eight topics that Portuguese young pharmacists found decisive to have a voice on.

During the process, working group participants took into consideration some available international documents to get more knowledgeable about each theme, some of them delivered by FIP.

One of the most gratifying things in this process was the active involvement of more than 60 young pharmacists, as well as the acknowledgement of different experts and patient advocates who have joined our meetings, which shows the potential and motivation that young pharmacists have to shape our profession.

4.4 Indonesian Young Pharmacists Group (South-East Asian region)

Apoteker Tanggap Bencana (Pharmacist Disaster Response)

Authors	Anggun P. Wardhani, Benny Wijaya, Aldizal Mahendra	Themes	COVID-19 response, emergency preparedness
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Background and context

The Indonesian YPG is a non-governmental, non-political, non-religious, non-profit organisation dedicated to young pharmacists under 35 years of age. Its main goal is to develop young pharmacists in their professional competence and to become a networking platform for young pharmacists across Indonesia.

The Indonesian YPG serves as a legal organisation under the umbrella of the Indonesian Pharmacist Association (IAI), and it has been independently formed in 17 provinces. After it was founded in 2012, West Java was one of the earliest provinces to establish its own local chapter, which actively conducted a varied, innovative programme to promote the pharmacy profession, such as PharmaCamp (a health campaign and social service for local people where the pharmacist lived in an outdoor camp) and *Apoteker Tanggap Bencana* (Pharmacist Disaster Response).

Today, *Apoteker Tanggap Bencana* counts as one of the most acclaimed and successful programmes conducted by the Indonesian YPG, and the same programme has been adopted and continuously improved in other Indonesian provinces with the highest disaster frequency. *Apoteker Tanggap Bencana* is also legally recognised by the IAI as the latest affiliate organisation within the association.

Case description

Being located on the Ring of Fire, Indonesia is under a constant risk of various natural disasters, including volcanic eruptions, earthquakes, tsunamis, landslides, hurricanes and floods. In 2018, when *Apoteker Tanggap Bencana* was initiated, Indonesia had been hit by the Lombok earthquake and the Sunda Strait tsunami. Although the National Disaster Management Agency (BNPB) handled disaster management at the national level and the Regional Disaster Management Agency (BPBD) at the regional level, the Indonesian YPG still saw the need for professional pharmacists’ service in the disaster areas. Some services that we think can be crucially handled by pharmacists are management and distribution of medicines and medical supplies, and maintaining health records.

The Indonesian YPG started to roll out *Apoteker Tanggap Bencana* training in collaboration with the BPBD for two days in April 2018. The target participants were young pharmacists, but all pharmacists who were interested in emergency

response could join. The training aims to form a group of pharmacists for disaster response and become a BPBD partner in disaster management. Through this training, the objective is the pharmacist helping by providing professional services and responding to the emergency with first aid, building tents, rescue, evacuation, and coordination. A total of 85 pharmacists joined with a distribution of 27 pharmacist representatives of IAI West Java chapter, four pharmacist representatives of other IAI local chapters, 54 young pharmacists, and pharmaceutical students. Before this first national-scale disaster response training was conducted, the committee team developed a module and syllabus on pharmaceutical service standards and disasters. The module was created with reference to "Basic module for disaster management volunteers. National Disaster Management Agency (BNPB). 2010" and "Responding to disasters: guidelines for pharmacy. International Pharmaceutical Federation (FIP). 2016".



First batch of pharmacist ambassadors on disaster response

The training took place outdoors at a location with rafting facilities. Two days of training were combined with theory and practical training. On day 1, participants learned about disaster management motivation to become a volunteer, and conducting emergency first aid, and shared sessions with an experienced disaster volunteer. Participants also learned about emergency tents for refugees. On the second day, participants learned about water rescue and vertical rescue. At the end, all participants were inaugurated as the first batch of pharmacist ambassadors on disaster response.

Outcomes, lessons learned and recommendations

There is a famous quotation by Sukarno, the first Indonesian president. He said: "Give me 1,000 old men, and I will undoubtedly rip Mount Semeru from its root. Give me 10 youths, I will undoubtedly shake the world." This is an affirmation that youth is the agent of change of a nation. In the Indonesian YPG, the young always have their way of expressing themselves. *Apoteker Tanggap Bencana* training arose from an initiative to get pharmacists involved in disaster response and, with full support from the IAI parent association, the programme went very well.

Since 2018, *Apoteker Tanggap Bencana* trained pharmacists have been actively involved in emergency response in their local areas. The programme also had lots of improvement. Modules and syllabused were updated, it was divided into two types of training (beginner and advanced), it was adopted by more than five province local chapters, and is now officially a legal organisation under the IAI that is focusing on the humanitarian and disaster fields.

4.5 Malaysian Pharmacists Society Young Pharmacist Chapter (Western Pacific region)

Survey on perceived job/training satisfaction and welfare among government contract pharmacists in Malaysia

Authors	Cedric Chong Jie Chua, Cherh Yun Teoh	Themes	Advocacy, welfare, job satisfaction
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Background and context

In 2016, the Ministry of Health Malaysia (MOH) introduced a contract system that would mark the start of reduced retention of early career pharmacists in the public sector. It was a move that posed fresh challenges to the training programme; notably, trainees and preceptors would now have to navigate a recruitment system that promises lesser spots than before.

A survey on perceived job/training satisfaction and welfare among government contract pharmacists was conceived following observation that there was a growing concern about irregularities in the training and work experience among these contract pharmacists. It was thus set up to develop an understanding of the plight and challenges faced by this group, with an emphasis on welfare. The data captured were to be directly presented to the Pharmaceutical Services Programme (PSP) of the MOH and, eventually, the chief secretary of MOH for further deliberation and action.

Case description

The survey had one objective — to understand the job satisfaction, welfare for provisionally registered pharmacists (PRPs) and fully registered pharmacists (FRPs) who were contracted by the MOH, and what proposals they may have to improve working conditions.

To provide context, “PRPs” refers to pharmacists serving their first year of traineeship, whereas “FRPs” are those serving either their second or third year with the ministry, who already hold a full practice licence. They could serve in either a public hospital or a public clinic. Eventually, both groups exit the system if they fail to secure permanent recruitment from the MOH.

In the process of formulating the survey questions, some basic research was conducted. We eventually took a leaf from a similar research previously conducted by the PSP, while also considering input from previous dialogues with the ministry, as well as our personal observations of feedback made about the system.

The survey was crafted in two parts: the first includes questionnaires and the second covers open comments. The questionnaires were later segmented into different parts to target specific questions to each population group. To summarise, the questionnaires explored a few key things:

Consistency in claiming earned time off (PRPs & FRPs)

Pharmacists, under the Professional and Management Category in the Public Services Scheme, are not entitled to paid time off for duties performed outside office hours (i.e., overtime shifts). Instead, they are rewarded with earned time off (ETO), which can be utilised for their personal time-off needs without exhausting their annual leave entitlements. We sought to explore if there were cases in which contract pharmacists were refrained from collecting ETOs while performing some of their instructed duties not within office hours.

Consideration of permanent recruitment (PRPs & FRPs)

The selection of pharmacists to fill permanent positions was initially understood to be based on the annual performance throughout a candidate's first contract period of two years (which includes one year as a PRP and another as a FRP). However, there were discrepancies in the implementation, where only the performance during the first year of contract was taken into consideration. Hence, we sought to explore if respondents agree that performance during the second year of their contract should be considered in the selection process.

Training opportunities (FRPs)

Contract pharmacists are often thought to be deprived of training opportunities compared with their colleagues of permanent status, on grounds that their employment is not permanent and that they would eventually leave service. We sought to identify if the prevalence of this phenomenon was high.

Performing unwanted duties (FRPs)

Contract pharmacists, who command a lower “rank” in the command hierarchy, may sometimes be instructed to perform duties unwanted by their senior counterparts. We sought to explore the prevalence of this situation in centres across the nation.

Unfair leave deduction (PRPs)

In order to fulfil the criteria of 52 weeks in training, PRPs may sometimes have their sick leaves deducted from their annual leave allowance to make the cut. This is different from the FRPs, for whom sick leave does not consume their annual leave. We sought to explore the prevalence of this situation in centres across the nation.

Preceptor-trainee relationship (PRPs)

The quality of preceptors is crucial in moulding future generations of pharmacists in service. We sought to explore and identify the quality of preceptors in providing training, including but not limited to their ability and interest to teach, to encourage independent problem solving and to foster healthy preceptor-trainee relationships.



Survey result presentation by Cedric Chua, Chairperson of MPS Young Pharmacists Chapter (MPS-YPC) and Teoh Cherh Yun, Executive Representative of MPS Public Pharmacists Chapter (MPS-PPC) to the leadership team of Pharmaceutical Services Program (PSP) of MOH Malaysia

The questionnaires were followed by an open feedback/suggestion section that focused on two teething concerns:

Performance evaluation by preceptors

Current literature reviews suggest that evaluation by preceptors may be influenced by various factors. This may include personal influences or perceptions which may not be correct, the central tendency in marking or even the halo effect. We sought to explore the prevalence of the issues of concern and allow for constructive suggestions to be given to indicate a method of evaluation deemed fair by contract pharmacists.

Criteria for getting permanent posts

While there have been some clearly laid criteria for candidates to work towards securing a permanent position, many still found the process lacked transparency. For example, no ranking is made public, and candidates generally do not receive justification on the outcomes. We sought suggestions on how the criteria can be improved.

The survey was launched in a Google Form format. It was circulated primarily via social media (Facebook, Instagram, LinkedIn and WhatsApp) between 8 and 14 June 2020.

Outcomes, lessons learned and recommendations

The survey successfully garnered 388 responses in just a week. As it was widely circulated online, it caught the attention of the PSP, who requested that the data be presented to it.

From the analysis of the data, we were able to identify a few key issues and propose improvements based on the feedback collected:

1. **Consistency in claiming earned time off (ETO):** A recommendation was made to the PSP to re-emphasise the policy for ETO as per the current guideline on extra hour allowances by the Public Service Department (PSD). On top of that, it was also suggested that the PSP should illustrate the scopes and scenarios of pharmacy activities that qualify for ETO claims to provide clarity for all concerned parties.
2. **Perceived lack of training opportunities for contract pharmacists:** A recommendation was made to the PSP to provide contract pharmacists with more training opportunities. In return, knowledge transfer is to be carried out in a stipulated time frame after the training to ensure the learnings can be spread to all.
3. **Shoring up preceptor quality:** A recommendation was made to the PSP to establish a proper quality assurance system on preceptors' training. This includes a preceptor register, a standardised training manual to streamline the tasks and approach required of a preceptor while providing training in their respective fields, as well as a manual on periodical audits.
4. **Confusion over recruitment criteria:** A recommendation was made to the PSP to consider a more transparent evaluation system, whereby the scoring and weight of each aspect used to rank and select contract pharmacists for permanent appointments are made known to all.
5. **Improving evaluation standards of trainee pharmacists:** A two-tier evaluation was recommended, the first being the assessment performed by preceptors at the training facility, and the second being a centralised evaluation after passing the first evaluation — to be held through an Objective Structured Pharmacy Exam (OsPHe) or paper examinations, as well as face-to-face interviews. On a finer aspect, a recommendation was made to improve the evaluation scale used in log books via the incorporation of discrete and specific Behaviourally Anchored Rating Scales (BARS) to provide a more accurate picture on a trainee pharmacist's performance.
6. **Protecting trainees from abuse, mistreatment and prejudice:** A recommendation was made to the PSP to establish a secure channel to receive complaints and issues met by contract pharmacists directly. This will facilitate honest feedback from aggrieved parties, without fear of their identities being disclosed to their superiors.
7. **Logbook improvement:** As means to reduce man-made errors in the calculation of marks and percentages, as well as to facilitate a more accurate and proper analysis of tracking and trending, a recommendation was made to the PSP to consider the adoption of an electronic logbook that will be accessible across all training facilities.

There were two meetings with the PSP on these issues, one in July and another in September. While it heard us, the fact that most of these were long-standing issues in a sprawling bureaucracy meant that an easy fix was never on the horizon. The discussions that took place were, however, a start, and they succeeded in bringing to light the concerns on the ground that would otherwise have gone unnoticed by the central authority.

Aside from some developments that were made public, which we quickly communicated to our communities, many of the issues remained a work in progress. Keeping tabs and taking the initiative to follow up was therefore essential to track our progress. This was nevertheless a challenge of its own because the society held no official role in the programme administration. Such was the nature of advocacy work that we had come to embrace — in short, it is a long game that centres around:

1. Quick observation and thinking to pick out the sentiments surrounding an issue or concern at large;
2. Having a sleek action plan, which includes everything from having a robust survey framework to an effective communication strategy, all based upon a strong understanding of the audience we are targeting; and
3. Persistence in championing the issues, because speaking up for our peers in the toughest of times is the right thing to do.

Chapter 5. Way forward

Early-career pharmaceutical groups (ECPGs) can contribute and bring innovative solutions to improve global health. However, there are limited data on the nature, extent and impact of ECPGs on global health. On behalf of ECPGs, we conducted the first global survey to describe the roles and contributions of early career pharmacists and pharmaceutical scientists locally, nationally and internationally to global health.

There is limited information on the existence of ECPGs worldwide. For this reason, our survey targeted three categories of respondents: (i) individuals who do not have ECPGs in their countries (Group A); (ii) individuals who have ECPGs in their countries (Group B); and (iii) representatives of ECPGs in their countries (Group C). Figure 36 shows that countries such as Canada and Russia do not have an ECPG (Group A, highlighted in red). Countries that have an ECPG (Groups B and C), such as Zimbabwe, Indonesia and Australia, are highlighted in green. Additionally, there were some respondents in Group B who were not aware of the existence of ECPGs in their countries, such as Brazil and India (highlighted in purple).

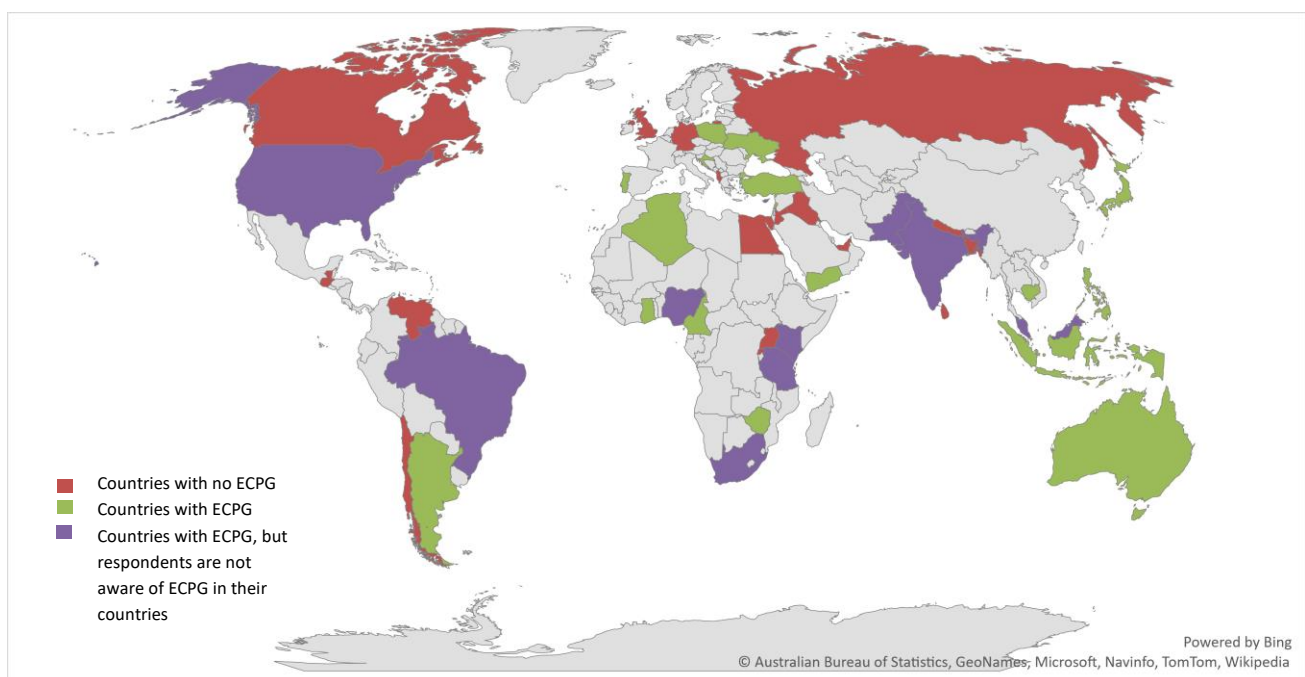


Figure 36. Category of countries from the survey

Based on our survey findings presented in Chapter 3, we propose six actions for ECPGs as a way forward to increase the reach, visibility and impact of early career pharmacists and pharmaceutical scientists on global health locally, nationally and internationally:

1. Advocate the establishment of national and regional ECPGs;
2. Increase engagement and collaboration with national and regional ECPGs;
3. Support the development of new programmes;
4. Support the generation of evidence and promote collaborative initiatives;
5. Promote national and regional ECPGs and ECPG-led initiatives; and
6. Align ECPG initiatives with members' expectations.

5.1 Advocate the establishment of national and regional ECPGs

The FIP YPG recognises the importance of having national and regional ECPGs to ensure that the voices of emerging pharmacy and pharmaceutical science leaders are heard, amplified and recognised. The FIP YPG is keen to support new initiatives to create national and regional ECPGs. Through the current survey and a previous FIP YPG member survey,³⁸ we identified many countries that do not have an ECPG. To assist the establishment of ECPGs, in March 2021, the FIP YPG published a guide intended for use by any individual or organisation planning to establish an ECPG in their region. The step-by-step guide walks through the many essential steps, including choosing a structure, defining mission and vision, making decisions, managing resources and finances, promoting membership, and so on.

Establishing a successful ECPG does not happen overnight; it involves many conversations with many different stakeholders and requires a sound understanding of members' needs and expectations in a region. For example, establishing a new ECPG in conjunction with existing pharmaceutical groups in a country will require conversations with leaders within the parent organisation. Additionally, an ECPG that understands local needs and expectations means pharmacists and pharmaceutical scientists are more likely to join it. The survey findings presented in Chapter 3 provide useful information on members' expectations in countries without an ECPG. Information on members' expectations will allow FIP members who would like to establish an ECPG in their region to tailor the discussion based on the needs and expectations of members in that region.

The FIP YPG has started approaching ECPGs. At the time of publication of this report, the FIP YPG is in discussion with several organisations and individuals (e.g., in Canada, Portuguese-speaking countries, Tanzania, Honduras, Egypt, Cyprus, Greece) to support the establishment of ECPGs in those regions. An example of the support provided by the FIP YPG to establish an ECPG is through FIP digital events conducted in collaboration with FIP member organisations (see Figure 37). The FIP YPG would like to encourage enthusiastic early career professionals who are interested in setting up an ECPG to get in touch via ypg@fip.org.

How to Initiate Early-Career Pharma Organisations

16th June 2021
17:30 pm

Speakers

Filipa Ferreira
International Pharmaceutical Federation - Young Pharmacist Group (FIP - YPG)

Catarina Nobre
Associação Portuguesa de Jovens Farmacêuticos (APJF)

Jorge Batista
Associação de Farmacêuticos dos Países de Língua Portuguesa (AFPLP)

Moderator

Djamila Reis

JOIN US at
<https://zoom.us/j/94934478975>

fip ADVANCING PHARMACY WORLDWIDE AFPLP

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Figure 37. The digital event conducted by FIP and the AFPLP on initiating early-career pharmaceutical groups

5.2 Increase engagement and collaboration with national and regional ECPGs

The FIP YPG aims to increase global engagement and collaboration with national and regional ECPGs. This was achieved by proposing new articles in the FIP YPG statutes at the 2019 FIP World Congress in Abu Dhabi, which were ratified by the FIP Bureau in January 2020. Following ratification of the articles, the FIP YPG formed a network to increase engagement and collaboration with national and regional ECPGs. This network aims to facilitate collaboration among ECPGs, to collect data and intelligence for the [FIP Global Pharmaceutical Observatory](#),³⁹ as well as to share opportunities among the organisations. As of July 2021, 16 national and regional ECPGs are part of the FIP YPG network.

To increase engagement with us, we contacted national and regional ECPGs that are not part of our network to help disseminate the survey. The initial contact led to the FIP YPG inviting the organisations to join the network and potentially support and collaborate with these organisations to help develop their programmes based on their members' needs.

The current survey gave the opportunity to understand the currently ongoing activities and identify the national and regional ECPGs' priorities. This will support building a partnership to foster engagement between ECPGs, and how FIP YPG can tailor the different support for regional or national ECPGs based on their needs.

5.3 Support the development of new programmes

The FIP YPG can support the development of new programmes. The FIP YPG has 15 subcommittee members who liaise with FIP sections and special interest groups and therefore can help support the development of new programmes related to all areas of pharmacy practice, science, education and workforce. For example, in Uganda, individuals suggested that their local YPG could support updating guidelines related to the expansion of medicines access and building awareness of safe medicines. The FIP Health and Medicines Information Section (HaMIS) areas of interest include writing and publishing resources related to medicines information. The FIP YPG subcommittee member liaising with HaMIS can facilitate with updating the guidelines related to medicine access and safe medicines in Uganda. In addition, the FIP YPG can assist with FIP endorsement of new programmes developed by national and regional ECPGs to enhance credibility and recognition. For example, the FIP YPG is establishing collaboration with the Malaysian Pharmacists Society - Young Pharmacists Chapter (MPS-YPC) under the FIP Provision programme. The MPS-YPC has developed a new programme coined "Community PRP Empowerment Sessions", which aim to strengthen the counselling skills and professionalism of Malaysian intern community pharmacists.

The FIP YPG will support ECPGs in developing new programmes in areas where there is relatively low activity compared with the level of global needs. Our survey results highlight gaps in programmes where early career pharmacists and pharmaceutical scientists can lead or contribute, but which are not being conducted. Two example areas are primary health care and COVID-19 vaccine administration. These gaps present opportunities to develop new programmes by ECPGs to address critical public health issues, and at the same time expand the scope of practice for pharmacists and pharmaceutical scientists.

5.4 Support the generation of evidence and promote collaborative initiatives

The FIP YPG can support the generation of evidence. Our survey findings in Chapter 3 highlight the many initiatives conducted by ECPGs in different countries to improve global health. Robust and rigorous evaluation is needed to quantify the extent of the impact these initiatives have had on global health. The FIP and FIP YPG can support the effective generation of evidence through the Global Pharmaceutical Observatory (GPO) developed and maintained by FIP.³⁹ The FIP GPO aims to collate and validate, effectively and efficiently, global data on the pharmacy workforce, practice and pharmaceutical sciences in order to promote our members' contribution to health. Accessible, high-quality intelligence will be available through the GPO in order to support our member organisations in their work.

The GPO and the data collected through this survey can be used to help promote collaborative initiatives between ECPGs with similar priorities. The FIP YPG can support these initiatives by connecting ECPGs that are part of the FIP YPG network. The network allows national and regional ECPGs to connect and work with each other on programmes that are high on their priority list. Additionally, the FIP YPG can work with ECPGs within a specific region to identify areas that are under-addressed and need more attention in that region.

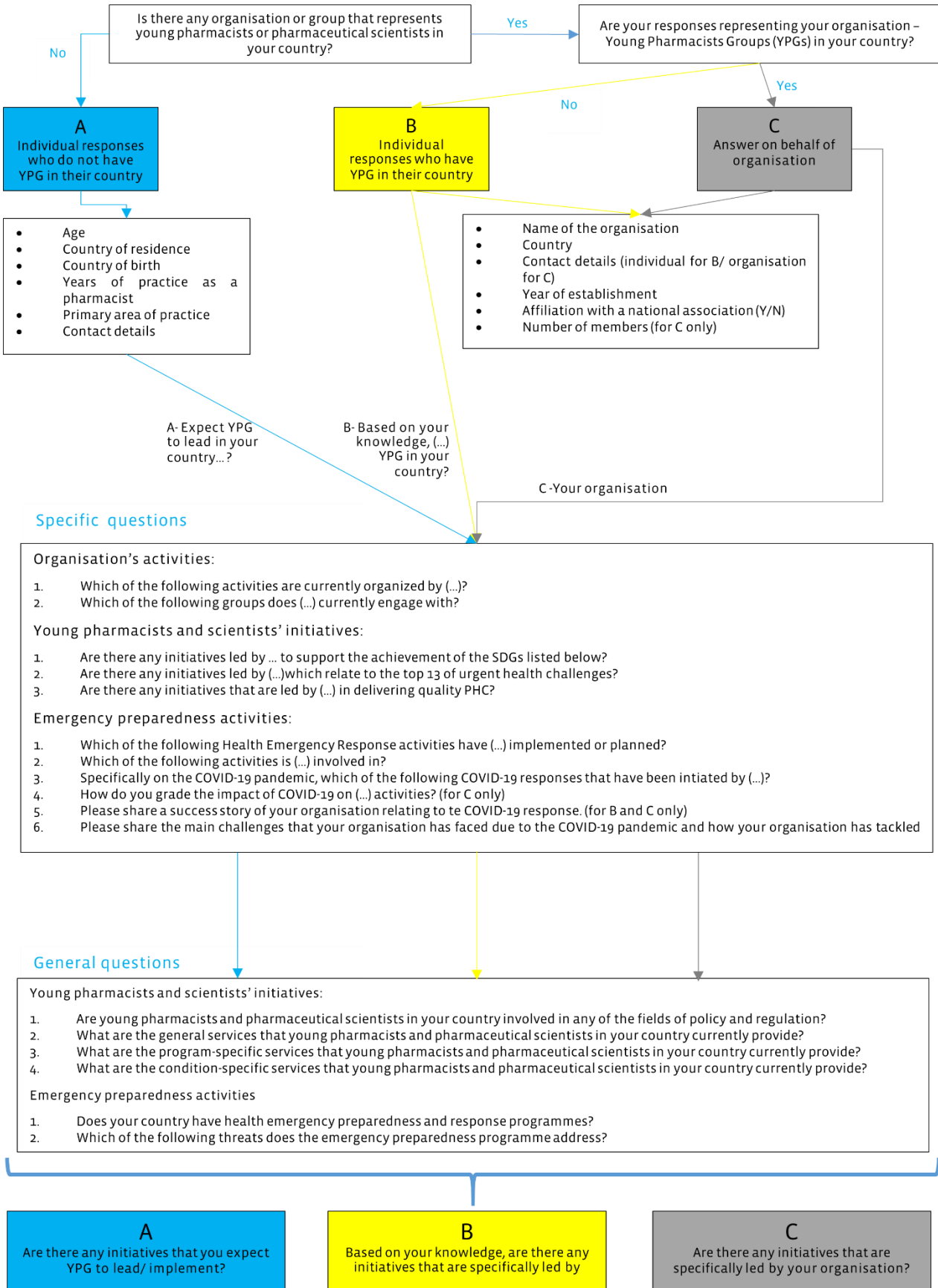
5.5 Promote national and regional ECPGs and ECPG-led initiatives

The FIP YPG will increase the promotion of national and regional ECPGs and activities led by ECPGs. Our survey results show that national and regional ECPGs have many initiatives related to the Sustainable Development Goals, urgent global health challenges, primary health care, emergency preparedness programmes, COVID-19 related activities and youth initiatives. The case studies presented in Chapter 4 further highlight ECPG initiatives in different regions. Collectively, the survey results and case studies provide data and insights into the initiatives led by national and regional ECPGs and demonstrate the potential impact that they are having. National and regional ECPGs are likely to benefit in terms of membership recruitment if pharmacists and pharmaceutical scientists in their regions are aware of their existence. As a global network of early career pharmacists and pharmaceutical scientists, the FIP YPG will support the promotion of national and regional ECPGs as well as the initiatives led by them through the FIP YPG social media platforms, newsletters, digital events and the FIP YPG network.

5.6 Align ECPG initiatives with members' expectations

The FIP YPG will support national and regional ECPGs in aligning ECPGs' initiatives with the expectations of early career pharmacists and pharmaceutical scientists in their region. Our survey findings show some misalignment between members and ECPGs in terms of what areas they are engaged in. For example, individuals in the South-East Asian region expected ECPGs to work towards achieving SDG5 (gender quality); however, there were no activities conducted by organisations that were related to this goal. Understanding the gaps between members' expectations and the actual initiatives can help national and regional ECPGs better align their activities with their members' needs. The FIP YPG will share the survey findings with ECPGs within our network to help point out the misalignment, so that the ECPGs can better tailor their future activities to support early career pharmacists and pharmaceutical scientists locally.

Annex 1. Flow chart of “Making a difference: the roles of young pharmacists groups in global health” survey questions



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