

Focus on Mental Health

The Contribution of the Pharmacist

2015



ADVANCING
PHARMACY
WORLDWIDE



Colophon

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International Pharmaceutical Federation (FIP)
Andries Bickerweg 5
2517 JP The Hague
The Netherlands
www.fip.org

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Foreword

By the President Elect of World Federation for Mental Health (WFMH)

Mental health for all should not just be a mantra. It should be a reality. For many people in the world, good mental health is still a dream and this is why the World Federation for Mental Health (WFMH) holds a World Mental Health Day, marked on 10 October, calling on individuals, organisations, governments and society at large to join forces to advocate for mental health, to promote the rights of those who experience mental health problems and their families, to lobby for increased investment for research in the field and to improve general access to mental health services.

As a family doctor who sees people with mental health problems, their families and relatives daily, and as chair of the Public Impact Committee of WFMH, clinical member of the World Mental Health Day Committee and president elect of WFMH, it gives me great pleasure that the International Pharmaceutical Federation (FIP) has agreed to play an important role in mental health advocacy, mental health promotion and prevention. I am very pleased that FIP has risen to the challenge of advocating for improved mental health services and has become a partner in developing World Mental Health Day materials.

Access to good health and evidence-based practice is not a reality for many people who experience mental health problems. We need to provide better access to mental health care, including prevention, detection and ongoing treatment. For many people experiencing mental health problems, pharmacists and family doctors are likely to be their first point of contact. This means that members of FIP have a significant role to play.

We know that over 450 million people globally suffer from a mental disorder. Suicide accounts for more than 10% of deaths in industrialised countries and is a serious public health problem. We also know that 2.8% of total years lived with disability are due to schizophrenia often because of inadequate treatment, and nearly 50% of people who have schizophrenia globally receive no mental health interventions.

There are many global initiatives to address these gaps in treatment, including the movement towards universal health coverage (UHC) described in the World Health Report 2010, [1] the WHO mhGAP Programme [2] and the WHO Mental Health Action Plan 2013–2020. [3] Delivery of these initiatives requires a different skill mix and a different attitude to health. Pharmacists have a significant role to play if we are to make mental health for all a global reality.

On a practical level, investments in research and the identification of new medicines for mental health conditions can lead to a wider range of treatment through community pharmacies, and primary and secondary care. Assessing people for medication side effects and making interventions to address these through supported medication schemes can promote adherence. Smoking cessation can be promoted from the local pharmacy, increasing the lifespan of smokers with schizophrenia or other mental health conditions. Pharmacies can support evidence-based practice and self-care, including the promotion of lifestyle changes such as better nutrition and more exercise.

This FIP “Focus on mental health” report gives excellent examples of how pharmacists and pharmaceutical organisations are making a practical difference to mental health care, and we urge others to come on board and be active partners.

FIP has shown true global leadership through this initiative. We need individual pharmacists, their professional organisations and pharmaceutical companies to be active in local and national mental health initiatives. There is still a lot to be done for mental health and mental health advocacy. We call on all pharmacists and pharmaceutical associations to join together with FIP and work with the WFMH to continue to advocate for improved access to and better outcomes in mental health care.

Professor Gabriel Ivbijaro, MBE, MBBS, FRCGP, FWACPsych, MMedSci, MA
President Elect of the World Federation for Mental Health
Visiting Assistant Professor, NOVA University, Lisbon, Portugal
Immediate Past Chair, Wonca Working Party on Mental Health
Medical Director, The Wood Street Medical Centre, London, UK

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Introduction

The World Health Organization (WHO) Mental Health Action Plan 2013–2020 [3] recognises the essential role of mental health care in achieving good health for all people. It is based on a life-course approach, aims to achieve equity through universal health coverage and stresses the importance of prevention. The plan sets important new directions for mental health, including a central role for provision of community-based care, the need of more effective leadership and governance for mental health, as well as implementation of strategies for promotion of mental health and prevention of mental illness.

As it is more and more recognised that mental health management requires a comprehensive health care approach with common services and resource mobilisation efforts, pharmacists and their professional associations are taking an increasing role. This is shown by the development at international and national level of policy frameworks, such as in Australia (with the publication “A framework for pharmacists as partners in mental health care”) or in the USA through the development of a specialty in psychiatric pharmacy practice, and the publication of a position paper [4] on the value of psychiatric pharmacists, to list only a few examples.

The International Pharmaceutical Federation (FIP), the global federation of national associations of pharmacists and pharmaceutical scientists, has prepared this briefing document as an overview of different activities for mental health promotion and mental illness prevention and care pharmacists are involved in. These are structured into 1) triage; 2) health promotion; 3) early detection; 4) optimal treatment outcomes through addressing and detecting medication related problems and needs, and adherence support; 5) education, including prevention of addiction; 6) helping to shape public policies; 7) interprofessional collaborative practice; and 8) research.

These activities, together with various functions of pharmacists are supported by references or illustrated by examples of programmes and campaigns developed at local or national level by pharmacists and their associations. Both are included at the end of this document under References and Appendices. It should be noted that the list of activities run by pharmacists is not exhaustive; rather they provide food for thought for future activities of national associations and for different stakeholders (including policymakers), helping to identify pharmacists as an important and underused resource that could fill existing health care gaps in mental health.

This document aims to serve as a platform to engage a variety of audiences, including those involved in organising, delivering and funding mental health services. The engagement can be tailored to the audience, whether it is for advocating the use of pharmacists to their full potential with policymakers, or working with other health care professionals and organisations to develop multidisciplinary models of mental health care including pharmacists, or promoting the role of pharmacists in the delivery of mental health services to people living with mental conditions, carers and the public.

This document also aims to support pharmacists' associations to take an even more prominent role in the world day devoted to mental health, World Mental Health Day. This world day is organised by the World Federation for Mental Health (WFMH) and is supported by the WHO. Since 1992, when it was established, World Mental Health Day has been an annual event taking place on 10 October. In some countries, this day is a part of a larger “Mental Illness Awareness Week”. It aims to raise public awareness of mental health issues, promoting open discussion about mental disorders and their associated stigma, and advocating for investments in prevention, early detection, promotion and treatment services. With this report, FIP invites pharmacists and their associations, as well as all stakeholders, to promote good mental health around the globe.

1 A focus on mental health

1.1 Mental illness vs mental health

Mental health is defined by the WHO as “a state of well-being in which an individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community”. [5] Thus, as defined in the globally accepted principle: “There is no health without mental health.” Indeed, mental illness encompasses a number of diagnosable disorders that significantly interfere with an individual’s cognitive, emotional or social abilities. [6]

Mental illnesses comprise a broad range of disorders, with different symptoms and signs. However, they are all generally characterised by some combination of abnormal thoughts, emotions, behaviour and relationships with others. All mental disorders fall within a wider spectrum that includes neurological and substance-use disorders. [7] Many of these disorders are episodic or chronic. [8]

For the purpose of this report, the following mental illnesses have been considered, based on the classification of mental and behavioural disorders by the Chapter V of the International Classification of Diseases (ICD-10)¹ produced by the WHO in 1992. [8] It consists of 11 main groups:

- F00–F09: Organic, including symptomatic, mental disorders (including dementias and delirium)
- F10–19: Mental and behavioural disorders due to psychoactive substance use
- F20–29: Schizophrenia, schizotypal and delusional disorders
- F30–39: Mood [affective] disorders
- F40–49: Neurotic, stress-related and somatoform disorders
- F50–59: Behavioural syndromes associated with physiological disturbances and physical factors
- F60–69: Disorders of personality and behaviour in adult persons
- F70–79: Mental retardation
- F80–89: Disorders of psychological development
- F90–98: Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
- F99: Unspecified mental disorders.

Addictions, including dependence and abuse of psychoactive substances (F10–19), fall under mental disorders, since addiction changes the brain in fundamental ways, disturbing a person’s normal hierarchy of needs and desires and substituting new priorities connected with procuring and using the substance. The resulting compulsive behaviours that override the ability to control impulses despite the consequences are similar to hallmarks of other mental illnesses. [9]

Much is unknown about the causes of mental illnesses. Multiple factors, such as social, psychological, biological and genetic, may make people vulnerable to mental disorders. Their occurrence may be associated with rapid social change, stressful work conditions, gender discrimination or social exclusion.

Mental illnesses can also be influenced by unhealthy lifestyle, risks of violence and physical ill-health or human rights violations. Exposure to a natural disaster is a potent risk factor for mental disorders, too. Biological causes that can contribute to mental illnesses include genetic factors and chemical imbalances in the brain. [1]

1.2 Impact of mental illness

1.2.1 Prevalence & trends

When using disability-adjusted life years (DALYs) to measure consequences of disease burden, mental disorders are among five of the top 10 leading diseases. [2] An estimated 450 million people around the world have a mental disorder, [3] which means that at any given time, around 10% of adults are suffering from one.

¹ The WHO is revising its classifications in this section as part of the development of the ICD-11 and an international advisory group has been established to guide this.

[4] Health systems have not yet adequately responded to the burden of mental illness and, as a consequence, the gap between the need for treatment and its provision is large all over the world. [5] A portion of the global burden of disease attributable to mental and behavioural disorders accounted for around 12% in 1999, and this figure is expected to rise to 15% by 2020. [3]

1.2.2 Consequences

Mental illness has clear economic and social costs. The Agency for Healthcare Research and Quality in the USA estimated a cost of US\$57.5bn in 2006 for mental health care, equivalent to the cost of cancer care. [5] But unlike cancer, much of the economic burden of mental illness is not the cost of care, but the loss of income due to unemployment, expenses for social support, and a range of indirect costs due to a chronic disability that begins early in life. Global expenditure on mental illness is thus bigger, estimated at around US\$2.5tn (with two-thirds in indirect costs) in 2010, with a projected increase to over US\$6tn by 2030. [6] For a comparison, total global expenditure for health was US\$6.5tn globally in 2010, with total global expenditure for health per person per year US\$948, according to the WHO. [7]

For people living with mental disorders and their families, the social consequences of direct or indirect impact of mental disorders are broad. They can include unemployment, disrupted social networks, stigma and discrimination, and diminished quality of life. Stigmatisation and discrimination may further impact on employment and act as barriers to social participation and seeking effective treatment. [8] Restoration of mental health is not only essential for individual well-being, but is also crucial for economic growth and reduction of poverty in societies and countries. [9]

There is huge inequity in the distribution of adequate care for mental disorders across the world, with a wide gap between the need for mental disorders treatment and actual provision. Between 76% and 85% of people with severe mental disorders receive no treatment in low- and middle-income countries. In high-income countries, the range, between 35% and 50%, is also alarming. [10]

1.2.3 Medicines for mental illness

There are several different types of medicines available to treat the symptoms of mental illnesses. Some of the most commonly used psychotropic medicines (also called psychiatric or psychotherapeutic medicines) are antidepressants, anxiolytics, antipsychotics, mood stabilisers and stimulants.

People with illnesses like schizophrenia or bipolar disorder, or people who have long-term or severe depression or anxiety, might need to take medicines for their whole life. [11] Treatment of chronic and recurrent mental illnesses include highly variable responses and tolerability, drug interactions, and adverse effects that can be serious, irreversible and even fatal. Medication management is crucial to ensure optimal treatment outcomes and the avoidance of harm. The harm may include adverse physical and mental effects as well as personal and system costs.

In recent years, the use of psychotropic medicines has increased, in some subgroups dramatically, with a mix of positive and negative effects. This leads to increased requirements on clinical training and knowledge in psychopharmacology not only among trainee and practising clinicians, but also among undergraduate and postgraduate physicians, pharmacists and nurses, in order to prepare them to use psychotropics safely, appropriately and effectively. This is especially important in the context of their expanded off-label uses, with more comprehensive and sustained attention to the assessment of individuals, and greater reliance on their education and collaboration. [12]

The growth in the use of psychotropic medicines has also raised the profile of psychotropic polypharmacy with its detrimental impacts on patients in long-term care. The role of the pharmacist as a resource for optimum medicines use and safety through interventions such as medicines review in collaboration with prescribers is but one option that health systems are undertaking as a response. [13] Monitoring the metabolic side effects of psychotropic medication more generally is also an increased requirement [14] with antipsychotic polypharmacy associated with increased rates of hospital admission [15] and death. [16]

In addition to medicines, other approaches to mental health care include the use of various mental health services, for example, approaches based on a recovery model of mental disorder, or focused on challenging stigma and social exclusion and creating empowerment and hope. [17]

2 The need for better management

The treatment of mental disorders is a complex scenario involving both physical and psychological aspects. Physical problems are often inadequately managed in people with serious mental illness. There is evidence that mental illness is affected by diseases such as cancer, and also affects diseases such as diabetes, HIV/AIDS and cardiovascular disease. [18] There is, therefore, a need to provide comprehensive, integrated and responsive care, resulting in the better management of people with mental disorders who are likely to develop or already have other diseases.

People with mental disorders have a heightened risk of suffering from physical illnesses due to their reduced attention to their own physical health, reduced uptake of medical care, and poor adherence, as well as reduced access to and quality of physical health services. [19]

Because of a higher prevalence of physical illnesses that are often undertreated, people with mental disorders experience disproportionately higher rates of disability and mortality. For example, persons with major depression and schizophrenia have a 40% to 60% greater chance of dying prematurely than the general population. Although suicide is a leading cause of death in people with serious mental illness, it is not the leading cause of excess deaths in this group, that in fact being cardiovascular disease. It is important that mental illness is recognised as an illness with high mortality, no different from cancer, HIV/AIDS, diabetes or heart disease, with community-based programmes developed to target all aspects of morbidity and mortality.

Poor physical health care in mental illness is a significant challenge. Statistics show people with schizophrenia die 15–20 years earlier than the rest of the population, excluding suicides. [20]

Health systems have not yet adequately responded to the burden of mental disorders. The gap between the need for treatment and actual provision is widening all over the world. Further compounding the problem is the poor quality of care for those receiving treatment. Mental health treatment centres are faced with insufficient resources, lack of distribution and inefficient use of the limited resources available.

There is a worldwide shortage of human resources for mental health, particularly in low- and middle-income countries. This shortage is likely to be exacerbated by the lack of investment in training new workers. [21]

While the total expenditure on health per capita was US\$1,053 globally in 2011, with total government spending of US\$619 per person globally in 2011 (according to the WHO, data from 2014 report), [22] annual spending on mental health is less than US\$2 per person globally and less than US\$0.25 per person in low-income countries, with 67% of these financial resources allocated to stand-alone mental hospitals, despite evidence showing their association with poor health outcomes. [23] Mental health care needs to be integrated into primary health care. [3] According to the WHO, reprioritising this funding from institutional care towards community-based services, including the integration of mental health into general health care settings through better management and thorough reproductive, maternal, newborn and child health, HIV/AIDS and other chronic, non-communicable disease programmes, would allow access to better and cost-effective interventions for significantly more people. [18]

3 Translating needs into mental health policy

3.1 Mental health policy at a global level

Mental health management requires a comprehensive health care approach with common services and resource mobilisation. In May 2012, the WHO adopted a resolution on the need for a comprehensive, coordinated response from health and social sectors at the country level [7] in order to develop and strengthen comprehensive policies and strategies that address the promotion of mental health, prevention of mental disorders, and early identification, care, support, treatment and recovery of persons with mental disorders.

In addition to the resolution, the **WHO Comprehensive Mental Health Action Plan 2013–2020** [18] points out actions for better dealing with the emerging burden of mental diseases and other non-communicable diseases (NCDs). The action plan recognises the essential role of mental health in achieving health for all people. It is based on a life-course approach, aims to achieve equity through universal health coverage and stresses the importance of prevention. Its objectives are reproduced in *Appendix 1* of this document. This global action plan aims to improve the prevention and control of NCDs, including mental disorders, through a comprehensive approach built on partnership and national policies. It also emphasises the need to empower service users, families and communities, and to develop deinstitutionalised care. It gives the opportunity to enhance the priority given to mental health within the health plans of countries and to provide much needed services and care worldwide. [18]

The action plan states: *“In the context of improving access to care and service quality, WHO recommends the development of comprehensive community-based mental health and social care services, the integration of mental health care and treatment into general hospitals and primary care, continuity of care between different providers and levels of the health system, effective collaboration between formal and informal care providers, and the promotion of self-care.”* [18]

“Developing good-quality mental health services requires the use of evidence-based protocols and practices, including early intervention, incorporation of human rights principles, respect for individual autonomy and the protection of people’s dignity. Furthermore, health workers must not limit intervention to improving mental health but also attend to the physical health care needs of children, adolescents and adults with mental disorders, and vice versa, because of the high rates of co-morbid physical and mental health problems and associated risk factors that go unaddressed.” [18]

The WHO also developed the **WHO Mental Health Policy and Service Guidance Package (WHO, 2007)**, [17] which includes modules designed to address the wide variety of needs and priorities in policy development and service planning of mental health. Its purpose is to assist policymakers, planners and others involved in organising, delivering and funding mental health services to:

- develop policies and comprehensive strategies for improving the mental health of populations;
- use existing resources to achieve the greatest possible benefits;
- provide effective services to those in need;
- assist the reintegration of persons with mental disorders into all aspects of community life, thus improving their overall quality of life. [17]

WHO’s three most important recommendations concerning mental health for the development of policy and strategic plans, and for organising services are to deinstitutionalise mental health services, to integrate mental health into general health care, and to develop community mental health services. [17]

As part of policies developed in order to ensure prevention and control of NCDs that include mental illness, the WHO Essential Medicines and Pharmaceutical Policies Department developed several documents on access to NCD medicines. A background document, “Essential medicines for non-communicable diseases” (WHO, 2011), provided a comprehensive review of the causes and the policy and programmatic options for scaling up access to essential NCD medicines in countries. Recommendations related to selection, financing and pricing, quality and safety of medicines and their rational use are provided. Important mechanisms for providing sustainable access to NCDs include efficient procurement and distribution of these medicines in countries, establishment or the provision of viable financing options, generic promotion policies and the development and use of evidence-based guidelines for the treatment of NCDs. [23]

The World Health Professions Alliance (WHPA)² called for the eradication of the unethical discrimination associated with the mental illnesses in its **WHPA Joint Statement on Mental Health**. [24] People with a mental illness should be viewed, treated and allowed the same access to care as any other people. A person with live mental illness, including psychosis, should not automatically be considered to be legally incompetent. His or her judgement should be respected in areas where he or she is capable of making decisions. If he or she lacks the capacity to make a decision as to his or her medical care, surrogate consent should be sought from an authorised representative in accordance with applicable law. Health professionals need to focus on reducing the treatment gap of mental disorders. The benefits of knowledge on new treatment and care, and on the causation, associations, characteristics, early detection and prevention of mental disorders should reach all people living with mental disorders, particularly vulnerable populations. [24]

The WHO in its mental health policy and service guidance package has recognised including pharmacists as active members of the health care team as one of the approaches of improving psychotropic medication. [25] In its 10 recommendations to improve the use of medicines in developing countries, the WHO said that trained pharmacists need to be active members of the health care team and to offer advice to consumers about health and drugs. [25]

As defined in the **Joint FIP/WHO Guidelines on Good Pharmacy Practice: Standards for Quality of Pharmacy Services**, the aim of pharmacy practice is to “contribute to health improvement and to help patients with health problems to make the best use of their medicines and respond to the needs of the people who use the pharmacists’ services to provide optimal, evidence-based care.” Pharmacists’ major roles (that can be applied to wide spectrum of contribution to mental health) are to:

- Prepare, obtain, store, secure, distribute, administer, dispense and dispose of medical products (Role 1);
- Provide effective medication therapy management (Role 2);
- Maintain and improve professional performance (Role 3);
- Contribute to improve effectiveness of the health care system and public health (Role 4). [26]

Advances in pharmacists’ major roles include participation in team-based care, provision of medication management in different areas (ie, longitudinal provision), and transitional care.

Looking more specifically at long-term adherence to effective medications — when prescribing is appropriate and there is a shared decision in using medicines — pharmacists’ potential to improve dramatically the outcomes for people with mental disorders was highlighted in the **FIP Statement of Professional Standards on the Role of the Pharmacist in Encouraging Adherence to Long-term Treatments (2003, Sydney)** [27] because their services target some causes of non-adherence such as side effects, lack of information about the condition and the importance of treatment, and lack of understanding of the seriousness of the illness.

3.2 Mental health policy at regional or national level

3.2.1 Governmental policy

The most important step towards providing well considered and comprehensive nationwide mental health care is drafting a policy or plan that will guide mental health systems and services development. A mental health policy is an official framework by a government or health authority that provides an overall direction for mental health and a comprehensive model for action. In some countries, mental health issues are incorporated into a general health policy plan; in other countries, supplementary mental health policies or a plan is developed. *Appendix 2* offers the overview of suggested steps for developing a mental health plan according to the WHO guidelines.

Governments develop national strategies or policies to cope with mental health scenarios and/or for prevention purposes. Currently, the common content areas or the objectives of the existing British, [28] French, [29] European, [30] Australian, [31] [32] [33] and Canadian [34] policies usually cover the following:

² The World Health Professions Alliance (WHPA) brings together the International Council of Nurses, the International Pharmaceutical Federation, the World Confederation for Physical Therapy, the World Dental Federation and the World Medical Association

- Promoting mental health by targeting specific groups defined by age or risk factors criteria —
 - Promotion of positive mental health, supportive parenting [30] and prevention of mental disorder in childhood and adolescence, [28] as half of lifetime mental illnesses are already present by the age of 14 years; [35]
 - Promotion of mental health in adulthood for at-risk groups,³ to reduce disparities in risk factors and access to mental health services, and to strengthen the response to the needs of diverse communities to address their distinct mental health needs, acknowledging their unique circumstances, rights, and cultures; [30] [33] [34] [36]
 - Promotion of mental health in elderly to support healthy mental ageing. [28] [30]
- Promoting mental health by targeting specific diseases or related disorders (depression, suicide, violence, substance abuse) [28] [30]
- Promoting mental health in strategic and most affected places across the lifespan in homes, schools, and workplaces [28] [30] [32] [33] [34]
- Promoting early detection of mental health conditions through screening in clinics, schools and community pharmacies [28] [31] [32] [33]
- Improving the management of mental disorders to foster recovery and well-being for people of all ages living with mental health problems and illnesses, to uphold their rights and to provide access to the right combination of services, treatments and supports, [33] involving primary and secondary health care [30] [33]
- Fully including people living with mental ill health as valued members of society and reducing stigma and disadvantages. [28] [30] [32] [33] [34]
- Considering mental health as a central issue for each nation’s development in leadership, knowledge and collaboration [29] [30] [32] [33] [34]
- Addressing the abuse of prescription medication with respect to opioid medicines. [37] [38]

Over recent decades efforts have been made to shift from institutional to community-based care in some countries. For example, the Department of Health and Wellness of Nova Scotia, Canada, is funding the development, implementation and expansion of a community pharmacy-based mental health and addictions partnership programme. This programme (Bloom Programme) directly funds pharmacies meeting programme application requirements to provide enhanced longitudinal care to enrolled individuals with mental illness, addictions and medication-related issues. This programme was introduced in response to the province’s mental health and addictions strategy recommendations. [39] Canada has also developed a national strategy that includes increasing the role of primary health care providers to meet the needs of patients with mental health needs (see *Appendix 3*).

3.2.2 Strategies developed by pharmacists associations

Professional organisations representing health care professionals or patients organisations developed their own strategies to respond to the needs of mental health.

In a statement, the Pharmaceutical Group of the European Union (PGEU) highlighted the interest of pharmacists — through the broad network of pharmacies throughout all EU Member States — to work on mental health issues, and their important role in improving the mental health of the population, preventing illness and disease, promoting health information and education, and reducing drug-related damage. [40]

³ Those from low socio-economic backgrounds or poverty, ethnic minority groups, migrants, refugees and homeless people, populations suffering from societal stress due to socio-political and economic changes, disabled people, those suffering from a chronic physical illness and those undergoing life transitions.

The Pharmaceutical Society of Australia’s mental health care project, “A framework for pharmacists as partners in mental health care”, explored how to enhance mental health care service delivery to consumers and carers via future pharmacists’ roles as partners in mental health care. [41]

The Board of Pharmacy Specialties, an autonomous division of the American Pharmacists Association, certifies pharmacists in psychiatric pharmacy and behavioural health matters, which brings them instant professional recognition and credibility in this field. This differentiates and affirms pharmacists’ knowledge in mental health even more specifically and qualifies them to contribute to expanding professional expectations as the specialty-credentialled and highly-qualified member of the multidisciplinary treatment team. [42]

The College of Psychiatric and Neurologic Pharmacists (CPNP) is the sole provider of recertification credit to maintain credentials as a Board Certified Psychiatric Pharmacist (BCPP). The CPNP has partnered with the National Alliance on Mental Illness (NAMI) to develop educational materials for patients and address barriers to pharmacy services for those with psychiatric disorders. The United Kingdom College of Mental Health Pharmacy, which is in partnership with the Royal Pharmaceutical Society, has a special credentialled pathway for mental health pharmacists.

4 Pharmacists’ contribution to mental health

Pharmacists are specifically educated and trained health professionals who are charged by their national or other appropriate (e.g. state or provincial) authorities, among others, with the management of the distribution of medicines to consumers and to engage in appropriate efforts to assure their safe, efficacious and responsible use. Providing consumers with medicines alone is not sufficient to achieve treatment goals. To address medication-related needs, pharmacists are accepting greater responsibility for the outcomes, management and monitoring of medicines use, education of patients, families and other health care providers, and are evolving their practices to provide people living with mental disorders with enhanced medicines-use services. [25]

Extensive curricula that teach pharmacy students about the clinical presentation and effective treatment options for psychiatric and neurologic conditions provide practising pharmacists with didactic and experiential components of knowledge and skills needed to address population mental health needs. With appropriate education and training regarding mental health care, pharmacists are competent, sensitive and appropriately skilled health professionals ready to offer appropriate services to people with mental disorders in a manner complementary to or integrated with existing mental health services for the achievement of better outcomes. They help to integrate mental health into general health via disease-specific and social care services and programmes. They are ready to use the important opportunity to better manage mental disorders, promote mental health at both local and global level, and prevent mental disorders worldwide. Moreover, pharmacists are highly accessible in terms of time, location and affordability. [26]

Pharmacists have, therefore, several roles to play — and should be involved to their full potential — in:

1. Triage
2. Health promotion
3. Early detection
4. Optimal treatment outcomes
5. Education
6. Helping to shape public policy
7. Interprofessional collaborative practice
8. Research

These roles are explained below.

4.1 Triage

Due to their easy accessibility, pharmacists are often the first point of contact for information on diseases or medicines. Pharmacists offer comprehensive consultations reviewing physical and mental conditions and medication. They assess whether there is a safe solution for symptom treatment, depending on their expert knowledge and legal capacity.

If there is a safe solution, pharmacists offer it (for instance an over-the-counter choice, or advice on healthy habits for people suffering from addictions, such as tobacco addiction).

If the outcome of the analysis is that the person needs the expertise of another specialist or physician, pharmacists refer people with mental disorders to the appropriate services, for example when dealing with an individual having a psychotic episode or at risk of self-harming or possibly harming others. [43] When needed, they recommend support groups, patient associations, etc, that can be especially beneficial.

4.2 Health promotion

In their role as primary care professionals, pharmacists hold a unique position in the community, educating the general public or special audience groups on mental and physical well-being and healthy lifestyles. Pharmacists are initiators of communication campaigns, educational programmes or stand-alone activities aimed at general or specific-topic health literacies.

Pharmacists in Austria distributed free mental health education brochures, providing advice on how to cope with difficult situations and stress, and how to recognise and understand the first signs of mental conditions (see Activity 1). Leaflets educating the public on depression were distributed via pharmacies in Portugal (see Activity 2). Pharmacists in France educated the public, specifically certain groups (children, parents, etc), on the harmful impact of addictions (see Activity 3). Pharmacists in Portugal created a virtual toolkit containing interactive educational programmes for young children about addictions in order to educate them on healthy habits (see Activity 4).

Pharmacists in Portugal targeted injectable drug users to avoid the transmission of blood-borne infections among them. It is estimated that about 7,000 infections have been prevented since the beginning in 1993, thanks to the nationwide campaign “Say no to a second-hand syringe” (see Activity 5).

Pharmacists in Canada, trained as “pharmacist-community member pairs”, conducted secondary training of community pharmacists throughout the province and provided communities with educational outreach sessions. The programme (More Than Meds) demonstrated to communities and to government the value and opportunity of more directly connecting pharmacists to their local mental health and addictions communities (see Activity 6).

The College of Psychiatric and Neurologic Pharmacists Foundation is developing a database of US pharmacies that offer value-added services for those with mental health issues. These include point-of-care white blood cell monitoring for individuals taking clozapine and blister-pack prescription preparations aimed at enhancing adherence.

4.3 Early detection

Pharmacists are in a good position to evaluate an individual’s mental health and detect possible signs of mental disorders. Through discussions with them, their family or carers about symptoms or mood disorders, or by analysing over-the-counter requests (eg, for anti-anxiety products, analgesics or herbal sleeping products), pharmacists can identify possible problems. Screening for depression is an effective way to increase early recognition, and there is an opportunity to utilise pharmacists’ skills and accessibility to do this. Evidence shows that pharmacists are capable of performing screening and risk assessment services for depression and making referrals to appropriate health care professionals when needed. [44] Prescription records may also be used to detect problems. For example, a patient who stops thyroid supplementation is at risk of depression. When detecting individuals at risk of undiagnosed mental disorders, pharmacists refer them to other health professionals for psychological care, support programmes or medical assistance. [43] [41]

Pharmacists are rated among the most trusted health professionals and are the most accessible. [45] They create a friendly environment that encourages people to seek help about their mental conditions. In many countries, pharmacies offer a designated room or separated space for free consultation (in some European Union countries,⁴ this is mandatory for every pharmacy) where individuals can consult with a pharmacist about their conditions in private. This creates a constructive environment to target at-risk populations, such

⁴ E.g. in Ireland, Slovakia, etc. (According to national good pharmacy practice guidelines)

as elderly people, people suffering from a chronic physical illness, pregnant women or other vulnerable groups who are at increased risk of emotional, social or economic burden that can lead to depression, anxiety, addictions and other mental illnesses. To ease dialogue with people with mental disorders, pharmacists develop communication campaigns targeting specific issues, such as during the “Burn out campaign” in Switzerland (see [Activity 7](#)) inviting individuals to discuss these mental health challenges.

4.4 Optimal treatment outcomes

4.4.1 Addressing and detecting medication-related problems and needs

Pharmacists play a major role in improving individuals’ outcomes via comprehensive medication management. Pharmacist members of interdisciplinary treatment teams often participate in developing appropriate and achievable goals for treatment. They may discourage medication when drugs are being used inappropriately or for unachievable targets.

Pharmacists’ assessments occur at all stages of treatment in order to address the concerns and needs of people living with mental disorders. Such assessments are the foundation for ensuring effective management and appropriate monitoring of mental illnesses and treatment outcomes. There is substantial variability in different individuals’ responses and tolerances of psychotropics; and ranges for effective and safe doses are difficult to define. [25] Pharmacists’ strong scientific background in pharmacology and continuous education on the most up-to-date pharmacotherapy information enable them to manage medicine therapies in terms of possible medicine interactions or optimal use. Pharmacokinetic consultation to develop appropriate doses has been in place in some settings for over a generation.

Pharmacists also take specific populations’ needs into account. For example, the elderly are considered to have special needs, given the fact that they do not respond to medication in the same way as others. [46]

Some medicines involve a previous and mandatory assessment of possibly affected organs. For example, lithium, used in the long-term management of bipolar disorder, requires initial and follow-up blood tests evaluating thyroid and renal function due to its potential for causing dysfunction of these organs. Lithium also has a narrow therapeutic index, meaning that higher than recommended levels result in serious adverse consequences and lower than recommended levels lead to loss of effectiveness. Other commonly used medicines when taken with lithium can lead to lithium accumulation and toxicity. Before initiating and throughout the course of treatment, pharmacists, people with mental disorders and family members need to be involved in assessing laboratory tests of thyroid and kidney function and education to avoid potential interactions that lead to lithium toxicity. [43] Pharmacists can guide decisions regarding dosing, clinical and laboratory monitoring, and adjustment in medication to ensure safe and desirable treatment outcomes.

Several mental illnesses are commonly treated with medicines alone or together with other forms of treatment. However, achieving a complete response with satisfactory tolerance and acceptance of treatment long-term is commonly an ongoing struggle for people with mental disorders and their health providers. A critical role of pharmacists, for example in the management of depression, is to inform individuals early on of the potential benefits and adverse effects of medication and to prepare them for modifications in the treatment plan if and when needed. This requires the development of a strong relationship between the patient and pharmacist, support from family, and cooperation among health professionals to ensure the provision of coordinated, collaborative, individualised care.

4.4.2 Monitoring for effectiveness and safety

4.4.2.1 Monitoring for effectiveness

Along with assessing medication needs and optimising outcomes, pharmacists are in an ideal position to monitor the effectiveness of medication. Pharmacists credentialed to manage medication assess symptoms and progress (or lack thereof) towards therapeutic goals. Several articles describing psychiatric pharmacists’ practices demonstrate their ability to use common rating scales to monitor for clinical improvement (See [Activity 8](#)). Pharmacists can employ rating scales to assess symptom improvement such as the Clinical Global Impression (CGI) scale, Mini Mental Status Examination, Hamilton Anxiety Inventory (HAM-A) Scale, Hamilton Depression Inventory (HAM-D) Scale, Mood Disorder Questionnaire, and the Patient Health Questionnaire (9

item). Once a pharmacist assesses a patient's therapeutic response, he or she can modify or recommend changes in the treatment regimen in order to optimise treatment. [47] [48]

4.4.2.2 Monitoring for safety

Pharmacists educate people with mental disorders, families and caregivers about the possible side effects of medication that may impact on treatment-related outcomes and acceptance. Pharmacists help people with mental disorders and who are prescribed a new medicine make informed decisions about treatment by discussing the risks for potential adverse effects as well as the target symptoms and time to onset of both adverse effects and benefits. This approach, of informed decision-making, is associated with greater acceptance and satisfaction with treatment decisions in people with mental disorders. [43] This education takes place at all sites where pharmacists practise, including community pharmacies and residential and hospital environments. [43]

Pharmacists also actively monitor patients for side effects by interacting with them and their caregivers, using focused physical examination and observation, and reviewing laboratory results. They may proactively question patients and caregivers about particular toxicities or administer side effect rating scales.

Pharmacists monitor laboratory tests such as drug levels in the blood of patients receiving lithium and some mood stabilisers. Patients receiving lithium may also require monitoring of renal and thyroid function.

Monitoring and documenting blood glucose and lipids level as well as checking for significant weight gain [43] is recommended for many individuals with serious mental illness taking psychotropic medicines, especially several of the second generation antipsychotics, because of their propensity for promoting sometimes massive weight gain, glucose dysregulation, and elevated cholesterol and triglycerides. Documentation of white blood cell monitoring results by the pharmacist is critical for ensuring the safe use of clozapine, [49] [50] an effective treatment for schizophrenia. Patients receiving this medicine must be monitored for cardiac toxicity, seizures and bowel obstruction. Blood pressure changes, drug induced movement disorders and cerebellar toxicity may also need monitoring depending on the medicine prescribed.

When side effects are reported by individuals or carers, pharmacists can recommend appropriate interventions, stop medication or triage patients for further treatment such as emergency care in the event of an early-onset serious adverse effect. Pharmacists can also recommend changes in treatment, in terms of medicine choice, dose adjustments, tapering and crossover schedules, the addition of a second agent or a behavioural intervention to manage the side effect. And when a patient needs to stop a medicine, pharmacists can make sure they do so safely, minimising the risk of a severe withdrawal syndrome. [43]

When treating people addicted to alcohol with psychotropic drugs, pharmacists take into account possible impaired hepatic function due to alcohol abuse [43] and make recommendations, for example, they can suggest thiamine supplementation to improve hepatic and cognitive functioning. [43]

Some medicines can lead to dependence. That is the reason why pharmacists built communication campaigns, targeting those receiving anxiety treatments in Spain (see Activity 9) or insomnia treatment in France and Belgium (see Activities 10 and 11).

Pharmacists in Germany, the Netherlands, Denmark, Croatia, Ireland and Spain, to name a few, have informed the public about the risks of driving under the influence of some medicines and invited people with mental disorders to check their medicines and identify risks (see Activities 12,13).



Figure 1. First ask, then go! Driving under medication risks (Germany, 2012)



Figure 2. Interactive tools explaining dangers of driving under influence of medicines (Netherlands, 2011)

4.4.2.3 Minimising medicine and product interactions

Given their action on the pathways of main neurotransmitters in the brain, psychotropic medicines are often involved in interactions with other medicines or products. Any psychoactive treatment can interfere with day-to-day activities and pharmacists alert patients of this risk. Common interactions are with alcohol (due to its liver-induced metabolic destruction), tobacco and certain foods (e.g. grapefruit juice influences medicine metabolism and change the therapy outcomes for people with mental disorders). [43] In addition, mental activity can be also affected by certain medicines (e.g. OTC medicines for cough or influenza) or substances.

Smoking dramatically reduces levels of the antipsychotic clozapine. Numerous drug-drug interactions occur with anticonvulsant mood stabilisers. Administration of multiple agents affecting the neurotransmitter serotonin can result in serotonin syndrome, a potentially fatal disorder.

Pharmacists advise on contraception for women of childbearing age and taking St John's Wort (*Hypericum perforatum*) because of this product's ability to reduce the concentration of female hormones.

4.4.3 Adherence support

Pharmacists use their practice context and assessment skills to detect and address treatment adherence issues. This includes overuse, underuse, early termination and other forms of non-adherence. The pharmacist-individual relationship allows the pharmacist to understand the cause of the non-adherence and to facilitate communications, often involving the prescriber, to improve treatment adherence.

4.4.3.1 Assess adherence

For physical and mental disorders longer treatments are associated with poorer adherence. Pharmacists use various tools to support the assessment of adherence. The most common and important tool is based on the regular visits and relationship a pharmacist has with his or her patients. Recent data show that 91% of individuals taking medicine for mental illness are very comfortable going to their community pharmacies, and 53% have a strong professional relationship with their pharmacist. [51] Refill records are a quick and simple method for pharmacists to identify non-adherence. Pharmacy computer software can add to this. For example, *MedsIndex* was created by the Pharmacy Guild of Australia to measure adherence based on the renewal of medicines (see Activity 14). Adherence is also tracked with biological data such as drug concentrations in blood, or of biomarkers, for example revealing alcohol consumption.

4.4.3.2 Improve adherence

Poor adherence is common during the course of treatment with mood stabilisers, antipsychotics, antidepressants and other psychotropic medicines, as well as with medicines for chronic physical diseases in people with mental disorders. Over the course of a year, about three quarters of individuals prescribed psychotropic medication will discontinue it, often coming to the decision themselves and without informing their health care professional. [52]

Not all medicines, for instance antidepressants and antipsychotics, have an immediate action and pharmacists encourage people with mental disorders to continue medication, helping them to have realistic expectations throughout the course of treatment.

Knowing adherence problems are common, pharmacists help to prevent and resolve problems as they develop. Special programmes have been developed to enhance communication with a focus on adherence. For example, the Mirixa programme in Australia enables better adherence via a series of three to five-minute consultations in the community pharmacy every few weeks (see Activity 15).

Capitalising on descriptions of community pharmacy as a more relaxed place to obtain information about treatment, pharmacists explore the medication needs of people with mental illnesses such as depression and anxiety. In Australia, pharmacy practice incentives are being developed to maximise pharmacists' potential as medicines experts who use patient-friendly language in a friendly environment when providing treatment information, in order to improve outcomes for people affected by mental illness (see Activity 16).

In Denmark, a campaign was developed to improve adherence in those taking antidepressants. People were invited to discuss their medication with their pharmacists and offered a leaflet on depression (see Activity 17). Data show that medication counselling and treatment monitoring conducted by pharmacists can improve medication adherence. [53] And it is clearly shown in a survey that a collaborative practice model in which clinical pharmacy specialists managed the medication therapy of patients with mild to moderate depression increased patients' adherence to treatment and their satisfaction. The model also reduced subsequent visits to primary care physicians (See activity 18).

For people with mild dementia living unsupported in their communities, medication adherence is often problematic and can lead to worsening health problems. One solution, developed in Denmark, used SMS text-messaging to remind people to take their medicines (see Activity 19). In medical centres in the USA, pharmacists successfully conduct face-to-face interviews, but also telephone follow-ups. [53] Associated with a decrease in the number of visits to other primary care providers, [53] this solution also decreases costs of treatments for health care systems.

Certain mental disorders are associated with symptoms of lowered concentration, paranoia, etc, and these present an additional adherence challenge. To complete and support counselling, pharmacists can use interactive tools (e.g. a take-home video that emphasises the importance of medication adherence). Counselling sessions created in the Netherlands significantly improved attitudes towards medicines. [54]

Most of the time, those who have difficulty taking their medicines usually decide to not take them because of the inconvenience. Through discussions with people with mental disorders, their families and carers, pharmacists can detect problems patients experience, such as difficulty swallowing or organising medicine taking (for instance, among people living with dementia), [55] and provide solutions.

4.1 Education

4.1.1 Medication specific education

When treatment with an antidepressant, regardless of indication, is started, pharmacists play a critical role in support and education. Early treatment failures and refusals are common, resulting from a complex interplay of contributing factors. However, these problems can be addressed and avoided when pharmacists work closely with patients taking antidepressants. For example, early reassurance from a pharmacist can encourage people with mental disorders to continue to take their medicine despite nuisance side effects and little discernible benefit. Some side effects are known to be transient (e.g. nausea) and others long-standing (e.g. sexual dysfunction). Pharmacists can help people with mental disorders understand each side effect and help them with treatment decisions, including adjusting, switching, stopping or continuing treatment. [43]

In some cases, side effects (e.g. serotonin syndrome) can be challenging to recognise in a timely manner without a clear medication history. In their assessment of individuals' health and medication needs, pharmacists review risk factors for serotonin syndrome and provide people with mental disorders and their families with information on how to recognise it and mitigate the risk. In the event of a serious adverse effect to a psychotropic medicine (e.g. serotonin syndrome, hyponatremia, systemic allergic reaction, acute dystonia, etc.) pharmacists can help identify the potential cause of the adverse effect and provide guidance to people with mental disorders, families and health providers as to the right course of action, including triage to urgent care. [43]

Pharmacists discuss with people taking clozapine the risk for these and other adverse effects, indicating the risk period, probability, how to recognise the effects, what to do if they occur and what to do to minimise the risk.

4.1.2 Prevention of medicine or substance addictions

(i) Preventing abuse of dispensed medicines

Pharmacists ensure that medicines are not illegally misused. Pharmacists in Australia prevent misuse of pseudoephedrine as a precursor in the illegal manufacture of methamphetamines, drugs that are highly addictive. They record pseudoephedrine dispensing in a protected database alongside the individual's identification, so that any repeated demand, even in different location, is revealed (see Activity 20).

Diversion of a medicine can be avoided by checking that it has really been taken. A Portuguese initiative consisted of checking methadone dispensed in community pharmacies was being taken (see Activity 21). Naltrexone and buprenorphine were then added later to the initiative.

For the same reasons, pharmacists need to control prescription withdrawal closely. In Canada, an alert system to give information about fake/falsified prescriptions was set up (see Activity 22). Improved pharmacy software can be also useful. In Canada and the USA, mandatory systems are in place for collecting information on all Controlled Drug prescriptions. They may also take into account prescriptions reported stolen or lost (see Activity 23).

(ii) Preventing abuse of unused medicines

Once treatment is over, pharmacists support medicine disposal schemes because medicines that are not properly disposed of can be dangerous to people with suicidal thoughts, naive people or children. For this purpose, education campaigns have been organised (see Activities 24–27) in some countries regarding the disposal of leftover medicines. In the USA, pharmacists developed and used a tool called GenerationRx, which contained communication materials to raise awareness on the dangers of leftover prescription-only medicines abuse and misuse among adults and teenagers (see Activity 28).



Figure 3. Safe disposal of medicines and needles information (Luxembourg, 2003)

Pharmacists organised take-back collections of expired and unused medicines, for instance, by appointment with pharmacists in Malaysia (see Activity 29) or by bringing the medicines to the pharmacy directly (e.g. in France, Spain, Slovakia, Canada). [56] In the USA, the public could ask their pharmacists for an envelope to mail their medicines directly to a disposal centre (see Activity 30).

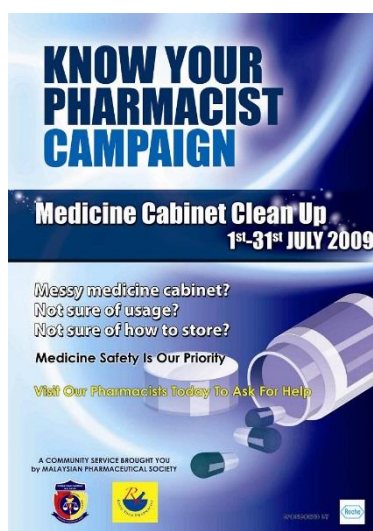


Figure 4. Medicine cabinet clean-up (Malaysia, 2008)

An activity to prevent the theft or misuse of used patches that contain residual drug is being carried out in Canada. Pharmacists are implementing a policy in pharmacies where every patient is using fentanyl patches would be required to returned used patches to the pharmacy before more patches can be supplied (See Activity 31).

(iii) Detecting addiction to substances

Any discussion with a person is an opportunity to ask about addictive substance consumption. If alerted by suspicious behaviour, pharmacists can support parents in detecting addiction to or consumption of alcohol or illegal drugs through the provision and advice to testing devices (e.g. alcohol breathalyser, marijuana tester) through community pharmacies. Pharmacists in France, for example, encouraged the public to test their alcohol consumption by offering an inexpensive breathalyser (for €1) in their community pharmacies (see Activity 32).

Pharmacists also educate the public on cessation of addictive substances, mostly alcohol or tobacco. In Denmark, an online tool was built to people throughout the whole process of quitting, and to prevent possible relapses, too. Accessible at any time and personalised, it provides individualised complementary support (see Activity 33). Pharmacists in Spain received special training in smoking cessation before a campaign targeting people addicted to tobacco, and used interactive tools to engage with the wider public in entertaining way, for example, by exchanging cigarettes with lollipops (see Activity 34). Similar campaigns were led in the past by pharmacists associations in Brazil, Malaysia, Ireland and the Czech Republic, to name a few.

(iv) Naloxone counselling

Opioid overdoses continue to be a frequent cause for concern in many countries. Pharmacists have developed roles in the dispensing and, in some cases, prescribing of naloxone for the frontline treatment of opioid overdose. Pharmacists play a major role in educating these groups about the appropriate use and concomitant care that needs to be administered in a suspected overdose.

4.2 Helping to shape public policy

Pharmacists have a unique knowledge base and perspective that can contribute to the development of public policies related to medication for mental disorders. On a population basis they can help improve monitoring, assure appropriate use and address economic issues related to medication.

The role of specially trained pharmacists in the treatment of chronic psychiatric outpatients has been shown to be useful and cost-effective for individuals and for society. Indeed, medication monitoring conducted by the pharmacist was estimated to cost 40% of the equivalent task conducted by the clinic psychiatrists when calculated on a per time basis. [57] It is even more important for one's ability to live in the community, as described in the WHO's objectives [18] to link patients from hospital care to community.

Managing the costs of medicines is critical to making the best use of limited resources to maximise health care for as many people as possible. [26] Ensuring the availability of generic medicines in the public sector is likely to be one of the most cost-effective options [18] and pharmacists are involved in reducing spending on medicines through providing generic alternatives without compromising safety. Together with promoting rational use of medicines, this significantly helps to reduce the costs. An Australian study of pharmacist-conducted domiciliary medication reviews showed significant declines in the overall numbers and monthly cost of medicines. [57]

Pharmacists assure the integrity of the medicine supply chain, including detecting spurious/falsely-labelled/falsified/counterfeit medicines, ensuring proper storage of medicines and quality preparation of medicines when needed. This also includes assuring the proper prescribing of medicines so that dose regimens and dosage forms are appropriate. Instructions for use are clear, medicine-medicine and medicine-food interactions are prevented, known and predictable adverse medicine reactions, including allergies and other contraindications, are avoided, unnecessary treatments are minimised and the cost of medicines is considered. [26]

Pharmacists play a key role in the determination of appropriate medication in psychiatric disorders. They develop and implement programmes to assure appropriate medication in vulnerable populations such as young children and encourage appropriate monitoring for metabolic side effects in those receiving antipsychotics. [58]

4.3 Interprofessional collaborative practice

Interprofessional collaboration is noted throughout various pharmacists' activities from health promotion to treatment. According to the 2013 WHPA **Statement on Interprofessional Collaborative Practice**, [59]

effective interprofessional collaborative practice can lead to improved access to health interventions, efficient use of resources, and reduced incidence and prevalence of disability, in particular disability associated with non-communicable diseases when health systems embrace interprofessional collaborative practice across the full course of the disease (health promotion, illness and injury prevention as well as disease management and cure, and rehabilitation).

The need for interprofessional collaborative practice has already been highlighted in the 2010 **FIP Statement on Collaborative Pharmacy Practice**. [60]

As part of the health care team, pharmacists are in a good position to discuss with prescribers any change in medication, such as administration, dosage or substitution of medicines, especially at the beginning or end of pharmacotherapy. Pharmacists either suggest prescription adjustments to prescribers or make them directly within the interprofessional collaborative practice approach, in order to optimise medicine treatment (e.g. to ensure treatment efficacy and safety or prevent complication). In more complex cases, pharmacists discuss the difficulties with prescribers to find possible solutions together. This is particularly important for people living with mental disorders who might need adjustment of treatment because of their age/gender/ethnicity (different pharmacokinetics), weight (different dosage) or ability to take medicines (different pharmaceutical formulation needs).

Surveillance of pharmacotherapy by pharmacists has a proven significantly beneficial impact on the effective, efficient and rational use of medication. A study of a pharmacist-led multidisciplinary initiative to optimise prescribing in 15 Swedish aged care facilities resulted in a significant decline in the use of antipsychotics, benzodiazepines and antidepressants by 19%, 37% and 59%, respectively. It involved pharmacists participating in multidisciplinary team meetings with nurses, nurses' assistants and physicians at regular intervals throughout the 12-month study. A follow-up study of the same intervention and control facilities three years later indicated the intervention facilities maintained significantly higher quality of medicine use, with lower proportions of residents prescribed more than three medicines which would lead to confusion, non-recommended hypnotics and combinations of interacting medicines. [61]

As pharmacology specialists, pharmacists use their expertise in educational visits to general practitioners to optimise prescriptions and enhance rational use of medicines. In the Netherlands, for instance, pharmacotherapy meetings are undertaken as part of routine clinical practice by groups of local community pharmacists and general medical practitioners. A trial of interprofessional meetings to discuss prescribing of antidepressant medicines resulted in the reduction of the prescribing of highly anticholinergic antidepressants to elderly people by 40%. [54]

People who benefit most from pharmacists' education or coaching and for disease state management services are those with a history of poor adherence to medicine therapy, or multiple comorbidities. [54] Pharmacists take an active role in ensuring optimal therapy management and prevention of future complications through medication reviews services that include comprehensive medication history taking, home interviews, medication regimen review and education. [55] As mentioned, in the study of pharmacist-conducted domiciliary medication reviews in Australia, there were significant declines in the overall numbers and monthly costs of medications. [50] Two additional studies of pharmacists' medication reviews in residential aged care facilities demonstrated significant reductions in the number and cost of medicines prescribed. In one study, 10.2% fewer residents were administered psychoactive medications and 21.3% fewer residents were administered hypnotic drugs. The impact of medication reviews on the reduction of mortality was measured as significant in the other. [62] [63]

4.4 Research

Accredited psychiatric pharmacy residencies require that the pharmacist complete a research project as part of their training. The role delineation study for board certification of psychiatric pharmacists also identified specific competencies in research. Pharmacists are involved in generating and disseminating new knowledge on the origin and treatment of mental disorders. Pharmacists are an effective part of psychiatric research teams, spanning the continuum from the bench (pharmacogenomics and pharmacokinetics) to the bedside (therapeutics and behavioural sciences) and to entire populations (pharmacoepidemiology and pharmacoconomics).

The unique knowledge and training of pharmacists provides them with opportunities and insights to contribute to the understanding of how to better treat patients with mental disorders and manage the systems that provide care.

5 Summary

Pharmacists are competent, sensitive and appropriately skilled health professionals with a crucial role in supporting management of mental disorders treatment. The pharmacy workforce has shown its ability to provide community based interventions to people with mental disorders in a manner complementary or integrated to existing mental health services for the achievement of better outcomes.

Pharmacists are ready to use the important opportunity to manage mental disorders better, promote mental health at both local and global level and prevent mental disorders worldwide. Moreover, pharmacists are highly accessible in terms of time, location and affordability. There is a clear value for the pharmacist practising in the field of psychiatry. [64]

In many countries worldwide, pharmacists play a major role in promotion of mental health and prevention of mental health disorders, in the early detection of individuals at risk of mental health conditions and based on triage, their referral to appropriate services.

Pharmacists' clinical role (especially of community and hospital pharmacists) lies mostly in the provision of high quality treatment to patients with mental disorders and with psychosocial disabilities, and in the ongoing support of adherence to treatments for mental health conditions. Pharmacists' provide services at all stages of treatment including assessment, monitoring and medication management in order to address individuals' concerns and needs. Such assessment is the foundation for ensuring effective management and appropriate monitoring of mental illnesses.

Pharmacists indirectly reduce the risks of suicide through programmes to take back unused medicines to the pharmacy, reducing the availability of toxic products at home and therefore acting also in the prevention of harm. Pharmacists educate on medicine or substance addictions.

Pharmacists generate and disseminate new knowledge by participating in research and development.

As part of the health care team and in programmes developed through a multisectorial approach, pharmacists take an active role in prevention of future complications through referral from or to other health professionals.

Pharmacists have a valuable role in the development and implementation of programmes for mental health promotion and prevention of mental disorders at the global and local levels, and integration of the social and mental care in the community, in order to support equitable access to affordable, quality and comprehensive health services that integrate mental health into all levels of the health care system.

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7 Appendices

7.1 Appendix 1 — Objectives of the WHO Comprehensive mental health action plan 2013–2020

The action plan [18] has the following objectives:

- to strengthen effective leadership and governance for mental health
- to provide comprehensive, integrated and responsive mental health and social care services in community-based settings
- to implement strategies for promotion and prevention in mental health
- to strengthen information systems, evidence and research for mental health.

7.2 Appendix 2 — Suggested steps for developing a mental health plan

A mental health plan should outline the details that will allow the implementation of the policy.

Step 1: Determine strategies and timeframes

Step 2: Set indicators and targets

Step 3: Determine major activities

Step 4: Determine costs and the resources available and budget accordingly.

To make the policies and plans effective and efficient drivers of improved mental health in a country, several actions are necessary to facilitate their implementation, including:

- disseminating the policy;
- generating political support and funding;
- creating an implementation group;
- establishing a demonstration area;
- **empowering mental health providers to implement the plan;**
- reinforcing intersectional coordination and promoting interaction among stakeholders. [65]

7.3 Appendix 3 — Additional activities being pursued in Canada

Changing directions, changing lives; the mental health strategy for Canada

In 2012, Canada launched its first national mental health strategy. Developed by the Mental Health Commission of Canada, the strategy identified six strategic directions to:

- Promote mental health across the lifespan in homes, schools and workplaces, and prevent mental health illness and suicide wherever possible.
- Foster recovery and well-being for people of all ages living with mental health problems and illnesses, and uphold their rights.
- Provide access to the right combinations of services, treatments and support, when and where people need them.
- Reduce disparities in risk factors and access to mental health service, and strengthen the response to the needs of diverse communities.
- Work with First Nations, Inuit, and Métis to address their mental health needs, acknowledging their distinct circumstances, rights and cultures.
- Mobilise leadership, improve knowledge, and foster collaboration at all levels.

Although the strategy is a broad overview of a concerted notional approach, it makes specific references to the need to increase the role of primary health care providers to meet the needs of patients with mental health needs. Further, it underscores the importance of leveraging technology, especially through electronics records, in an effort to optimise collaboration among health care providers.

The Canadian Pharmacists Association is a key stakeholders of this national strategy, and has been consulted on numerous occasions with respect to issues involving the pharmacy profession in Canada.

7.4 Appendix 4 — Examples of activities organised by pharmacists' associations

These summaries have been developed by the International Pharmaceutical Federation (FIP), based on a set of references (publications, materials of the activities, newspaper articles etc.). The list of references for a specific activity is available on request.

Activity 1 - Brochures for the public on mental well-being (Austria, 2005)

The *Österreichische Apothekerkammer* developed a set of three educational brochures to inform the general public about mental well-being. One of these, “Mental health — living consciously is living better”, deals with a broad range of mental well-being issues in an easy-to-understand way. It contains tips for maintaining good mental health or how to deal with minor depression, how to overcome stressful situations and how to improve mental abilities. Since 2005, 1,176 pharmacies have distributed these brochures to public free of charge.

Activity 2 - Distribution of educational brochures and leaflets dealing with mental health topics (Portugal, 2004)

The National Association of Pharmacists in Portugal (ANF) launched a project called iSaúde® (InfoHealth) that aimed to provide the public with information on how to maintain their well-being. Portuguese pharmacies distributed informational brochures to the public on various topics, including mental health and related topics (e.g. depression). They offered the brochures and leaflets free of charge or invited people to find an online version on the iSaúde® web-portal.

Activity 3 - Information campaign on addiction: tobacco, alcohol and illegal drugs (France, 2010)

In June 2010, the national council of *L'Ordre National des Pharmaciens*, the professional association of pharmacists in France, and the Governmental Agency on Drug Addiction (MILDT) organised a campaign through community pharmacies to raise awareness on addictions to tobacco, alcohol and illegal drugs. The campaign was supported by four posters that raised four different questions:

- Addiction, when does it start?
- Who can help me?
- Do I need it to party?
- What are the risks?

This campaign aimed to facilitate a dialogue between people with addiction and pharmacists. Pharmacists invited the general public to ask questions about these addictions.

Activity 4 - Educational computer game “Clube da Sara” (Portugal, 2009)

The National Association of Pharmacists in Portugal has developed an educational computer game called “Sara’s Club” (Clube da Sara) aimed at presenting the importance of healthy habits and avoidance of addictions to young children. Through this interactive program, the children can learn about tobacco addiction, drug addiction and medication through four major characters: Kápsula, Ampola, Cãoprimido and Sara. The design and format of the program was specifically developed to fit young children’s preferences. The game also describes the history of pharmacy in an easy-to-understand way.

Activity 5 - Syringe exchange programme (Portugal, 1993)

In 1993, a syringe exchange programme was initiated in community pharmacies in Portugal targeting injectable drugs users (IDUs) suffering from addictions. The programme aimed to reduce risks of HIV transmission among IDUs, to mitigate damage and to protect public health. Pharmacies encouraged IDUs to dispose of used syringes safely and free of charge. Moreover, for every syringe disposal, IDUs received a kit, initially composed of a sterile syringe, a disinfectant, a condom and a leaflet. In 1999, a vial of distilled water and a filter were added, and in 2007, two containers of citric acid were added to the kit.

Through this programme, 39 million syringes have been exchanged, 72% through pharmacies. A pharmaco-economic study from June 2002 assessed that in the first eight years of the programme, per 10,000 IDUs, more than 7,000 new HIV infections have been avoided, with significant savings for the National Health Service.

Activity 6 - “More Than Meds” project (Canada, 2014)

With the vision of community pharmacies being a place for promoting, supporting, and improving mental health and well-being through community partnerships, the “More Than Meds” project is helping to enhance mental health care in communities through partnerships among people with experience of mental illness and pharmacists. It builds a network of pharmacists who works to enhance their mental health-related services in their communities. Trained pharmacist-community member pairs conducted secondary training of community pharmacists and provided communities with educational outreach sessions. The project also creates resources for pharmacy team members and people with lived experience of mental illness to share. The programme demonstrated to communities and to government the value and opportunity of more directly connecting pharmacists to their local mental health and addictions communities.

Activity 7 - Burn-out campaign (Switzerland, 2006)

PharmaSuisse, the professional association of pharmacists in Switzerland, organises an annual campaign “Your Pharmacy — a key to your health” encouraging people to consult first with pharmacists about their health. In summer 2006, the campaign was focused on the risks affecting mental well-being, especially on the risks of burn-out. During the campaign the pharmacists screened for the signs of a burn-out and referred patients to physicians if needed. The message “Burn-Out? Your pharmacy, a key to your health” was communicated via promotional materials, including posters.

Activity 8 - Development and outcomes of a psychiatric pharmacy clinic for indigent patients (Texas, USA, 2005)

In Texas's Lower Rio Grande Valley, Su Clinica Familiar (SCF) is a community health centre that sees over 30,000 patients a year, 20% of whom have a psychiatric disorder. In 2005 SCF began collaborating with a psychiatric clinical pharmacist to provide free psychiatric services within the health centre. Consultation notes were reviewed by the medical director, and treatment, if approved, was begun the same day. During the period from April 2005 to June 2006, 96 (77%) of 125 patients referred to the psychiatric pharmacy clinic actually attended it. Fifty-three (72%) of the 74 patients who were asked to return for follow-up care returned. Over 90% of the pharmacist's clinical recommendations were accepted. Most referrals were for depression, anxiety, and cognitive impairment. Cost savings were estimated at US\$22,380.

Activity 9 - Medicines against anxiety (Spain, 2009)

In March 2009, the Colegio Oficial de Farmacéuticos de A Coruña organised a health promotion in-pharmacy campaign to promote the rational use of anti-anxiety medicines, specifically benzodiazepines. The campaign was communicated through public leaflets and posters, which informed about:

- rational use of anti-anxiety medicines and importance of adherence,
- possible side effects of anti-anxiety medicines, and
- lifestyle changes to decrease anxiety.

Activity 10 - Tranquilisers and sleeping drugs programme (France, 2006)

The Lorraine regional council of L'Ordre des Pharmaciens in France launched a campaign educating public on medicines for anxiety and insomnia. It was launched in pharmacies in late 2006.

The campaign was promoted by a pharmacy window poster and pharmacists were trained how to give practical information to people with mental disorders and how to make the most of the leaflet. Brochures were distributed via pharmacists, underlining four points:

- adherence to the treatment,
- facilitation of the dialogue between pharmacists and people with mental disorders,
- health promotion on addiction to these medicines, and
- reducing the consumption of these medicines.

Activity 11 - Stress, anxiety and sleeping disorders and the correct use of benzodiazepines (Belgium, 2006)

Since 2006, the Belgian Pharmacists Association (APB) has been involved in a project to reduce benzodiazepine use (project financed by Belgian Federal Government). Benzodiazepines are medicines used in treatment of mental conditions but, because of their side-effects, their use needs to be rational. The project was called "Stress, anxiety and sleeping disorders". Pharmacists were trained via special training sessions organised by Groupement des Pharmaciens Francophones. In the 2006–08 campaign, pharmacists handed out leaflets (printed directly from the pharmacy software) with relevant information with every benzodiazepine dispensed.

Activity 12 - “First ask, then go!” Driving under medication risks (Germany, 2012)

A German pharmacy campaign informed the public about the risks of driving under the influence of medicines. Every day around four million people visit a pharmacy, many of these are by car or by motorbike. Unlike alcohol, there are no legal limits for medicines: each driver is responsible for assessing his or her ability to drive. The simple recommendation to consult a pharmacist about the side effects of a medicine was communicated via posters with message: “First ask, then go!” and a picture of traffic lights displayed as pills (green, orange and red). Pharmacists explained the dangers of driving under the influence of certain medicines, especially those affecting mental conditions. Similar campaigns were held in Croatia in 2009, Ireland in 2008 and Spain in 2008.

Activity 13 - “Be sure you come back home!” Interactive tools explaining dangers of driving under influence of medicines (Netherlands, 2011)

In May 2011, the Royal Dutch Association for the Advancement of Pharmacy (KNMP) organised a communication campaign to raise awareness among the public on the risk related to driving while taking some medicines. This campaign, “Be sure you come back home!”, was relayed through posters displayed in community pharmacies, a radio advertisement and a dedicated website (www.rijveiligmetmedicijnen.nl). On this website, patients were able to type the name of a medicine and thereby learn the level of risk of driving while taking it. Moreover, a car video game enables users to experience how a driver's vision can be affected by some medicines. Patient leaflets distributed via pharmacies provided answers to the most frequent questions on this issue.

Activity 14 - MedsIndex-Adherence Evaluation tool (Australia, 2009)

Developed by the Pharmacy Guild in Australia, the *MedsIndex Score* is a way of evaluating adherence to long-term medication, which is particularly important in mental illness treatment. The score is calculated by monitoring intervals of medicine refills and reporting against expected refill intervals based on the doctor's instructions.

A score out of 100 is calculated for each of the medicines people with mental disorders take regularly. For instance, a score of 92 means that one whole month's dosage has been missing during a one-year period.

The *MedsIndex* summary includes the name of the person with mental disorders, name of the medicine and its strength, the quantity per prescription, and the total daily dose. The daily usage per prescription is then

calculated and compared to the time between the original prescription dispensing and subsequent repeats. Score is calculated for every month/dispensing of every medicine. Adherence is then calculated for one medicine as well as for the average for all medicines.

The individual's score is classified into four categories:

- Time to act to improve your adherence (lower 70),
- Your pharmacist can help you to improve your adherence (lower than 80),
- There is still room for improvement (lower than 90) and
- Optimal result (greater or equal to 90).

The score helps a pharmacist to assess what professional support people with mental disorders may need and to develop strategies for them to improve their medication adherence. The pharmacist may inform the physician about the problems or suggest help via professional programmes, e.g. dose administration aids, medication profiling service or a programme called *Mirixa* (see Activity 15).

Activity 15 - Mirixa — a programme to improve adherence (Australia, 2009)

Mirixa was originally a programme developed by the National Community Pharmacists Association in the United States and it was adopted by the Pharmacy Guild of Australia in 2010 for Australian people with mental disorders.

This programme aimed to improve adherence to treatment through a series of three to five-minute consultation at a community pharmacy every 12 weeks.

Patients with adherence issues are identified through *MedsIndex* (see Activity 14). Once a patient has been identified with a low adherence rate (low *MedsIndex* score), pharmacists can offer him or her an invitation to participate in the *Mirixa* programme, which involves a series of discussions led by the pharmacist. To take part in this programme, pharmacists follow a specific education programme and obtain certification. Pharmacists pay an annual fee of AUSS320 per year to be able to offer this service, which is free of charge to their patients (AUSS200 for branded programme and AUSS120 per generic programme).

This programme relies on pharmacy software, which calculates the *MedsIndex*. Once a patient is identified, the service is then supported through a web-based clinical software platform. This web-platform gathers the following information:

- Data on patient adherence (to calculate *MedsIndex* score)
- Record of professional assessment on the patient's barriers for proper adherence
- Clinical assessment
- Summary of previous appointments
- Patients' comments (and expected benefits from an increased adherence)
- Schedule for next session

After each session, patients have a print-out showing how their adherence has improved. Interventions by pharmacists translated into an increase of 12.5 in the *MedsIndex Score* or 1.5 prescriptions per patient per year.

Activity 16 - The Mental Health and Community Pharmacy Project (Australia, 2014)

The Mental Health and Community Pharmacy Project is a part of the "Fifth Community Pharmacy Agreement Research and Development Programme" managed by the Pharmacy Guild of Australia, and funded by the Australian Government Department of Health. In this agreement there are practice incentives which have a primarily healthcare stream and mental health is one of its priorities.

The project explores the medication needs of people living with illnesses such as depression and anxiety. It considers their expectations and carers' expectations as well as the experiences of community pharmacies. The project team is currently working in Queensland, northern New South Wales and Western Australia.

The objective is to assist people with mental illness with their medication and to capitalise on their descriptions of community pharmacy as a more relaxed place to obtain information about their treatment. People with mental illness also describe pharmacists as medicines experts who use patient friendly language

when providing treatment information and with over 5,000 locations in Australia they are well placed to become more involved in improving outcomes for people affected by mental illness.

During the project a pilot training for pharmacists and pharmacy assistants will be developed, as well as strategies to support the different needs, expectations and experiences of people with mental illness and carers. It is planned to involve about 1,000 people with mental illness and carers and 900 pharmacy staff and GPs at different stages of the project.

Activity 17 - Depression campaign (Denmark, 2008)

Pharmacies in Denmark launched a campaign in 2008 that targeted mental well-being, particularly depression. The campaign was co-organised by Psykiatrifonden (Mental Health Foundation), which works to promote mental health among Danes. The campaign ran in pharmacies for four weeks, from 26 October to 29 November 2008. It targeted mostly, but not exclusively, people treated for depression and aimed to improve adherence. Pharmacists provided key information on the treatment and importance of adherence and offered the public a leaflet with additional information on depression. The public were also invited to talk to their pharmacist about depression, its causes, risk factors, prevention, and possible ways of eliminating the risks through proper medication adherence.

Activity 18 - SMS service to remind people to take their medicines (Denmark, 2007)

An SMS adherence support service was developed by the Association of Danish Pharmacies in 2007. SMS reminders are provided to those who register at the website of the Association of Danish Pharmacies and are free of charge. People can register for multiple subscriptions to the same phone number, so they receive reminder for each medicine. This is particularly useful for patients taking several medicines at different times over days or weeks. It is also particularly beneficial for those taking medicines for mental diseases where treatment dosages can differ over the whole treatment process, with different initiation and termination dosages. People only have to register once every year to maintain this service. The SMS is personalised, so it may be adapted to be easily understood by every individual.

In August 2008, more than 12,000 SMS reminders were sent to people and this figure has risen steadily in following years. From April 2008 until February 2010, more than one million SMS reminders were sent.

Activity 19 - Collaborative pharmacy practice model survey (USA, 2002)

A survey studied patients' adherence to treatment, satisfaction and costs. A cohort of 13 primary care providers (PCPs) refer patients diagnosed with depression to the practice model at a staff-model health maintenance organization (HMO) immediately after the initiation of antidepressant medication. Clinical pharmacy specialists proceeded to coordinate follow-up with the patients for six months through a combination of scheduled office visits and telephone calls. The results were compared with a control group of patients being treated for depression by the remaining 17 PCPs at the facility. A total of 91 patients were referred to the intervention group and received care from the pharmacists during the 10-month enrolment phase; 129 patients were included in the control group. Adherence was significantly higher in the intervention group (medication possession ratio, 0.81 versus 0.66) ($P=0.0005$). Medication switch rates were higher among intervention patients as well (24% versus 5%) ($P=0.0001$). There was a greater decline in the number of visits to PCPs for patients in the intervention group (39% versus 12%) ($P=0.029$).

Activity 20 - Project STOP (diversion of pseudoephedrine), (Australia, 2005)

Project STOP is an initiative of the Pharmacy Guild of Australia to address the problem of precursor drug diversion through Australian community pharmacies. The most common precursor sourced through the community pharmacy channel is pseudoephedrine. This drug can be used in the illegal manufacture of methamphetamine, which can affect users' state of mind and carries a high risk of addiction development.

Project STOP is an online tool which provides decision support to pharmacists who need to establish whether requests for products containing pseudoephedrine are legitimate. It also assists pharmacists in meeting their state regulatory recording requirements, where they exist. The programme has been running nation-wide since August 2007 (and in Queensland, where it was developed, since November 2005).

Since the Project STOP system went online in 2005, pharmacists have denied sales of pseudoephedrine on 26,000 occasions. Project STOP is undeniably a contributing cause to the 49% fall in pseudoephedrine sales since 2006.

Activity 21 - Methadone administration programme in community pharmacy (Portugal, 1998)

In 1998, The National Pharmacists Association in Portugal initiated a programme for methadone administration in community pharmacies. This programme was extended for the administration of naltrexone in 2001, and for buprenorphine in 2004. All these medicines have high risk of addiction development. This programme is run in collaboration with governmental bodies (i.e. Infarmed and the National Institute on Drugs and Drug Addiction).

In 2008, 482 pharmacies with 711 pharmacists were involved in the programme of therapeutic administration of methadone; 2,176 people received methadone treatment from 203 pharmacies.

Similarly, 217 pharmacies ran a programme on buprenorphine in 2008 (364 pharmacists), with 14 people. Finally, in 2008, only one individual benefited from the programme on naltrexone (although this service was available through 234 pharmacies (392 pharmacists)).

Activity 22 - Alerte - programme to prevent drug abuse and diversion (Canada, 1985)

L'Ordre des Pharmaciens in Quebec, Canada, sends alert messages to all community pharmacies regarding risks of prescription medicine abuse and diversion. If a patient has high risk of such abuse (has several prescriptions at a time etc.), a pharmacist signs up him or her for the Alerte Programme and the patient is informed about the obligation to choose one prescriber and one pharmacy who will be in charge of treatment. Pharmacists could also provide people a list of drug/medicines abuse support organisations.

In 2008–09, 1,836 alert messages were sent to community pharmacies for writing of false prescriptions (527), medicines abuse (177), prescription falsification (180) and voluntary requests from people (874). Forty-three patients decided to withdraw from this programme.

Activity 23 - Nova Scotia Prescription Monitoring Programme (Canada, 1992)

The Nova Scotia Prescription Monitoring Programme (NSPMP) was established in 1992 as a government-funded programme administered by a private company (Medavie Blue Cross) and involves pharmacists monitoring prescriptions and reporting on the cases of their abuse. The programme is governed by an independent board of directors which consists of representatives from the College of Physicians and Surgeons, the Provincial Dental Board, the College of Pharmacy and the Department of Health, among others. It is a mandatory system which collects information on all prescriptions dispensed in Nova Scotia for Controlled Drugs, since these drugs carry a high risk of being abused or are addictive.

Pharmacists receive messages regarding any CDs at the time of dispensing. These messages confirm that the prescriber and prescription are valid and advises them if the prescription has been reported stolen or lost. The programme also indicates whether the patient has received any other prescriptions for CDs from other prescribers in the previous 30 days, what the prescriptions were for, where they were filled and on what date. The programme assists methadone clinics in monitoring individuals to ensure that no other CDs are being obtained during their treatment.

Activity 24 - Safe disposal of medicines and needles information (Luxembourg, 2003)

In 2003, *Le Syndicat des Pharmaciens Luxembourgeois* co-organised a campaign to inform the public on the safe disposal of needles. Pharmacists informed injectable drugs users on how to dispose of needles safely. The campaign consisted of a leaflet available in Luxembourgish, French, German, English and Spanish. In 2008, this information was supplemented by an additional leaflet on safe disposal of medicines, also available in five languages.

Activity 25 - Clean up your medicine cabinet (Slovenia, 2010)

During Pharmacy Week in April 2010, the Slovenian Chamber of Pharmacists organised a campaign under the slogan: "When was the last time you checked what drugs are in your medicine cabinet?". Pharmacists informed the public about the importance of not storing leftover medicines at home, including medicines for mental disorders, to eliminate the risk that they can be misused or that children can find and swallow them. Through this campaign, supported by leaflets and posters, the public received information on the importance of having a regular review of medicines at home, with some additional information on what medicines should be discarded, how to dispose of those medicines safely, and how to store medicines at home.

Activity 26 - Pharmacy week 2009: Do you know how to use, store and dispose your medicines safely and responsibly? (South Africa, 2009)

The National Department of Health in cooperation with the South African Pharmacy Council and the Pharmaceutical Society of South Africa organised National Pharmacy Week from 7 to 11 September 2009. The main theme of the campaign was "Do you know how to use, store and dispose of your medicine safely and responsibly?" During the week, pharmacists educated the public on how to use their medicines safely and responsibly, on the importance of keeping medicines in their original containers and storing them in a safe place, and on the correct disposal of expired, unwanted and unused medicines.

Activity 27 - Drug disposal campaign (Turkey, 2009)

The Turkish Pharmacists Association co-organised an educational campaign on disposal of medicines and collection of unused medicines through community pharmacies. As a result of the campaign, around 20,000 packages of medicines were collected. The campaign was supported by:

- a website (to present the project),
- brochures disseminated through hospital, health care units and community pharmacies,
- advertisements in public spaces, and
- activities in schools.

Activity 28 - GenerationRx – action against prescription drug abuse (United States, 2010)

Generation Rx is a programme designed by American Pharmacists Association (APhA) in collaboration with the Cardinal Health Foundation and Ohio State University College of Pharmacy which seeks to promote awareness of drug abuse in the community. It was originally tested in Ohio in a pilot roll-out and then extended nationwide in the USA. Medicines for mental conditions are at high risk of abuse.

The Generation Rx toolkit contains communications materials pharmacists can use to educate local schools and community organisations about the scope and consequences of prescription-only-medicines abuse and misuse.

It contains:

- Introduction information on the topic, PowerPoint slides with talking points, GenerationRx in a Drug-Taking Society, Activities for youth, "Family Feud" social game
- Presentation tools
- Guidelines for pharmacists: Talking to teens, Facilitator's guide
- Bulletin board instructions and panels
- Survey instructions and Youth survey

Activity 29 - Know your pharmacist – Medicine cabinet clean-up (Malaysia, 2008)

A medicine cabinet clean-up campaign was organised by the Malaysian Pharmaceutical Society and was a month-long event (July) consisting of public forums and road shows, media/radio exposures and "walk-in" invitations for the public to consult the community pharmacists regarding their health and medicine issues. The public were invited to call the pharmacies directly to schedule an appointment with the pharmacist for a consultation.

The public were then asked to bring to the pharmacy all medicines stored at home. Pharmacists checked for expired or damaged drugs, and relabelled the non-expired drugs if necessary. Pharmacists collected and disposed of all unwanted medicines. Pill boxes were given to selected customers to improve adherence. A medicine summary card was also filled out by the pharmacist so that the customer would know the name, dosage and usages of the medicines they were taking. Pharmacists also checked for proper dosages and times, possible polypharmacy, medicine interactions, side effects etc. Interventions like these help to prevent misuse of medicines and addictions, and also contribute to building patient-pharmacist relationships, which are especially important for patients with mental conditions. A total of 244 pharmacists took part in the campaign.

Activity 30 - “Dispose My Meds” campaign (United States, 2009)

On 19 April 2010, the National Community Pharmacists Association co-organised a national programme to provide people living with mental illness with a safe and effective solution to dispose of their unused medicines, which can carry a potential risk of addiction. This programme was initially implemented in over 300 pharmacies in the state of Ohio in a medicines disposal programme launched in November 2009. This programme was then extended at a national level to 800 participating pharmacies. They were referenced in a dedicated website: www.disposemymeds.com, and invited the public either to dispose of their unused medicines in their community pharmacies or to ask their pharmacists for a special envelope to mail their unused medicines directly to the appropriate disposal centres.

Activity 31 - Ensuring leftover medicines disposal (Canada, 2014)

Currently, in Canada, there exists a strategy to prevent the theft or misuse of used patches that contains small amounts of residual drugs. Pharmacists require patients who are using Fentanyl patches to return used patches to their pharmacies before they can be issued with new ones. Many pharmacists are implementing this policy in pharmacies, and have had a positive feedback from both patients and other health care professionals.

Activity 32 - Alcohol testing before driving (France, 2004)

A campaign organised by the national council of L'Ordre des Pharmaciens and the French Ministry of Transport was launched in 2004. It invited drivers to find out the possible effects of alcohol on their mental abilities by using an inexpensive (€1) breathalyser kit provided by their pharmacists. The breathalyser serves to determine if the alcohol level is within the authorised limit. The kit also contained information leaflets. In total, 46,000 kits were made available through pharmaceutical wholesalers.

Activity 33 - Stop smoking programme - online support tool (Denmark, 2010)

On 1 October 2010, the Association of Danish Pharmacies, the National Board of Health, and the Danish Cancer Society launched a service to support people managing their addictions, particularly nicotine addictions. This service was offered online and provided personalised support to people living with mental conditions, tailored by their needs. After people fill in their profile, a personalised tool supports their addiction management via videos, tips and exercises. The programme has several steps, starting with establishing resolution and maintaining it throughout the anti-addiction techniques until addiction-free, and also for possible relapse prevention. The tool allows for flexibility as people can access it at any time and adjust it to their needs.

Activity 34 - Exchange cigarette with a lollipop (Spain, 2011)

The Consejo Oficial de Farmaceuticos of Aragon (provinces of Huesca, Zaragoza and Teruel) regularly organises anti-tobacco campaigns to mark World No Tobacco Day (31 May). In 2011, during a campaign to encourage smokers to quit smoking, pharmacists exchanged cigarettes with a lollipop with the slogan: “Thank you for not smoking.” The campaign also highlighted that pharmacists can offer solutions to facilitate quitting. Pharmacists also offered stickers with the slogan “Today I do not smoke.” In 2014 the campaign focused on messages like “younger skin”, “more delectable meals”, or “save for the trip of your dreams” on scratch-cards distributed in pharmacies. Pharmacists explained that the first (and easiest) step to quit smoking is to recognise and be aware that this addiction can lead to health problems for smokers and people around them. Once making the decision to stop smoking, smokers were advised to seek professional help because this can

increase 10-fold the chances of success. Pharmacists all received training in smoking cessation before the campaign.

Similar campaigns have been led in the past by pharmacists' associations in Brazil, Malaysia, the Czech Republic and Ireland, among others.

International
Pharmaceutical
Federation

Fédération
Internationale
Pharmaceutique

Andries Bickerweg 5
2715 JP The Hague
The Netherlands

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