Unsafe medication practices and medication errors are a leading cause of avoidable harm in health care across the world. Medication errors occur when weak medication systems and human factors, poor environmental conditions or staff shortages affect the safety of the medication use process. This can result in severe patient harm, disability and even death.

**THE PATIENT PATHWAY ACROSS THE CRIMINAL JUSTICE SYSTEM**

Many people come across the criminal justice system some time in their lives and being sentenced does not imply that a person will live in prison indefinitely. In fact, even though there are no reliable estimates of the turnover in prison, there are studies pointing to mean prison stays as short as 80 days.

**MAIN CAUSES OF MEDICATION HARM ACROSS THE CRIMINAL JUSTICE SYSTEM**

**Moments of transition facilitate medication errors.**

This includes admission to prison or pre-detention, transfers between prisons and moments of release. There have been a handful of interventions developed shown to impact on medication safety in seamless care, including medication reconciliation and medication review. However, improvement in the quality of care do not immediately translate into correctional settings.

One important reason for errors to occur in moments of transition are inefficient and rarely interoperable health information systems. This has been shown for transfers between hospital and primary care, but also holds true for detention settings and community health services. In a recent survey conducted by WHO among 36 Member States of the European Region, in 18 Member States prison health information systems are not interoperable with community health information systems (HIPEDS 2022). Seamless transfer of information between and within correctional settings has been recommended as a crucial patient safety standard by a panel of US experts.

Another recommendation of this panel was to develop mechanisms to detect errors or near misses. HIPEDS 2022 revealed that only 41.7% of Member States have a standardized process for reporting medication errors in prisons.

**Medication non-adherence is another form of medication error.** Medication adherence is the process by which patients take their medication as prescribed, further divided into three quantifiable phases: ‘Initiation’, ‘Implementation’ and ‘Discontinuation’. In each of these phases, there are specific characteristics of the prison environment and the interlinks with the healthcare system that have a role to play.
Initiation: Many problems occur ahead of incarceration, which relate to inequalities in access to health services. Lack of access to community standard of HIV care has been described. Also, during incarceration, lower odds of ART initiation was reported among inmates with higher baseline CD4 count (CD4 ≥500 cells/mm³) (OR = 0.37, 95% CI: 0.14-0.97, I² = 43%). Availability of essential medicines in detention settings also impacts on the ability to initiate treatment, aside with procedural barriers that may limit prescribing rights of prison physicians according to their specialty (e.g., impeding general practitioners to prescribe direct acting antivirals (DAAs).

Implementation: In detention settings, people do not have autonomy to decide on their medication use and often rely on nurses, pharmacists or technicians to administer their medication. This has obvious implications on adherence behaviours. Barriers to medication adherence in correctional settings have been proposed to divide into Patient-Related Factors, where substance use and mental health disorders and the absence of social support impact negatively; Health care Provider-Related Factors, where attributes such as being disrespectful and judgmental have a negative impact; and Correctional Setting Factors, where the time of day inmates receive their medications influence their likelihood to take them, an aspect influenced by providers punctuality and procedural barriers in place (e.g., time window to request prn medication).

There is evidence of antipsychotic medication being used off-label in prison. A study conducted in a prison in the UK reported that less than one-third of all antipsychotic prescriptions were for psychotic disorders. Quetiapine was the most frequently prescribed overall and for off-label indications.

Concerns around medication adherence exist in people living in prison with HIV, where only around half of inmates have adequate (≥95%) ART adherence (pooled estimate of 54.6%; 95% confidence interval: 48.1-60.9%). Several potential barriers have been identified, including inadequate nutrition, social stigma, lack of economic and psychological support, misbehavior of prison staff and inadequate methadone prescription for those with opium addiction.

Discontinuation: Even though the WHO defined HCV elimination as a target to be achieved by 2030, studies suggest that the discontinuation rate for chronic hepatitis C treatment with DAAs is higher in inmates (3.7% vs. 12% non-inmates; p=0.003). In 42.8% of cases, discontinuation was due to release. Treatment retention for opioid use disorders (OUD) at 8 weeks following release has been shown to increase using extended-release buprenorphine (monthly injectable long-acting treatment) among adults, compared to sublingual buprenorphine-naloxone. This finding has led to legislative changes in some countries to ensure fully funded access to these treatments. The Helsinki conclusions have stressed that health care delivered to people in detention must be recognized as part of a pathway to and from community health services. However, HIPEDES 2022 showed that less than half of Member States (n = 17; 47.2%) had a support service to register people with community health services upon release.

Barriers in access to health care in the community by people with criminal history has been described, with as many as 80% being without health insurance. This ultimately leads to increased use of urgent care and frequently treatment initiated during incarceration is discontinued. HIPEDES 2022 showed that nearly 90% of Member States provide medication upon release to prevent this from happening. However, only around 40% of them, did so for all conditions, the most common being the ability to provide medication only for HIV, TB, HCV and drug use disorders (in order of frequency).

Material incentives and enablers have been suggested to have some positive short-term effects on clinic attendance, particularly for marginal populations such as people who use drugs, recently released prisoners, and the homeless; however, the evidence is currently insufficient to know if they can improve long term adherence to TB treatment.

LESS THAN HALF of Member States had a support service to register people with community health services

80% of people with criminal history are without health insurance

Polypharmacy has been linked to medication harm. The odds of polypharmacy is higher for older than for younger people living in prison (≥5 medications: odds ratio (OR) = 5.52, p = 0.035).
High-risk medication demand specific interventions. The observation that approximately 40% of patients with warfarin in a correctional facility were not achieving therapeutic INR levels and that 50% had no recent INR levels available to be reviewed led to develop interventions to address barriers. Some of these barriers included lack of sufficient on-site phlebotomists, issues with transporting patients to have lab tests performed, and nursing time being focused on other patient care duties. Strategies for anticoagulation management and patient monitoring included the implementation of a point-of-care (POC) service approach to warfarin management led by a clinical pharmacist in close collaboration with the prison physician. The service includes INR measurement at baseline, determining the appropriate range, and weekly checks performed until level is within the desired therapeutic range without requiring dosage changes. The process includes medication review to ensure the appropriate doses and no drug and food interactions. The service has led to prevent common morbidity and mortality events associated with warfarin use and is now being expanded to several other major correctional facilities.24.

References


50% of patients had no recent INR levels available to be reviewed

What can be done

There are several international Standards to ensure equivalent health care is provided to people in prison. This means at very minimum, that services are subject to the same accreditation standards and that healthcare personnel are subject to the same professional and ethical codes. Procedures to ensure patient safety, including reporting of medication errors and undertaking medication reconciliation and medication review, need to become fully available in prisons. Ensuring continuity of care and access to treatments is essential for seamless care and this also applies to people that come across the criminal justice system.