

THE NATIONAL RECOVERY AND RESILIENCE PLAN



#NEXTGENERATIONITALIA



SIFO on Italy's approach to EU funding for hospital digitization, the regional policy landscape, and innovative practices in drug management

What is the PNRR?

€191.5 Billion Investment

Italy's ambitious plan funded by the EU's Next Generation EU program to drive post-pandemic economic recovery

6 Strategic Missions

Structured framework with Mission 6 specifically dedicated to comprehensive Health and Social Care reform

Healthcare Transformation

Focus on modernization, digitalization, and sustainability of the entire healthcare ecosystem





Why Healthcare Reform Matters in Italy

Demographic Pressure

Italy's rapidly aging population combined with the rising prevalence of chronic diseases is creating unprecedented demand on healthcare services and resources

COVID-19 Lessons

The pandemic revealed critical vulnerabilities in system capacity, resource allocation, and the urgent need for resilient healthcare models

Regional Disparities

Significant variations in healthcare quality, access, and infrastructure exist across different Italian regions, requiring targeted interventions

Multidisciplinary Care

Modern healthcare demands efficient, sustainable, and collaborative care models that leverage diverse professional expertise

PROXIMITY CARE AND TELEMEDICINE

strengthening community healthcare services and home-based digital care

1. **Community Health Centers** and patient care management;
2. **Home as the first place of care and telemedicine**
 1. Home as the first place of care
 2. Implementation of Territorial Operational Centers (COT);
 3. **Telemedicine for better support of chronic patients.**
3. Strengthening intermediate healthcare and its facilities (**Community Hospitals**).

→ **1,350 “Community Houses”** (Case della Comunità) across Italy

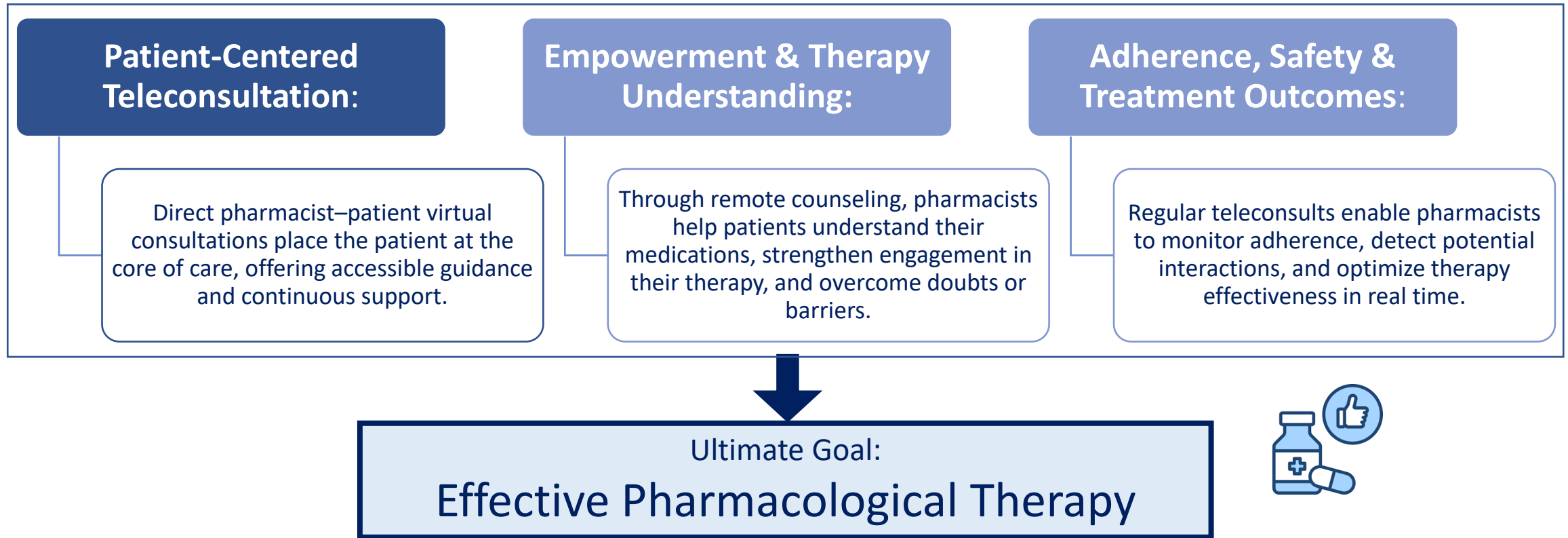
→ **At least 10%** of people aged 65+ covered by **home care by 2026**

→ **1 COT- Centrali operative territoriali** (Territorial Operations Centers) **per 100,000 inhabitants**

→ **Telemedicine projects** for chronic patients and remote monitoring

→ **400 “Community Hospitals”**

Telepharmacy & Telecounseling for Better Therapy Outcomes



The role of **Health service pharmacists** in the digitalization pathway

- bring **care closer** to the patient
- act as a **bridge between hospital and community** care
- **Telepharmacy**

Home Delivery – A SIFO Project

This ongoing project was created to deliver hospital medications directly to patients' homes while enhancing both safety and effectiveness, integrating responsible management with digital tools and telemonitoring to support adherence.



PLATFORM

The home delivery process is managed by the hospital pharmacist and supported by a certified logistics platform developed by SIFO. This platform uses a **central repository, enabling the creation of a single national database.**

APPS

Two apps support the system: one for patients, allowing continuous management, telemonitoring of adherence, and tracking of adverse reactions; and one for delivery personnel, ensuring efficient logistics and management of therapy returns.

INNOVATION, RESEARCH, AND DIGITALIZATION OF HOSPITALS

modernizing hospital infrastructure, upgrading medical technologies, and expanding the Electronic Health Record (Fascicolo Sanitario Elettronico) nationwide.



National-level digitalization

Improvement in the use
of **monitoring registries**

**National
Pharmacovigilance
Network
(2022)**

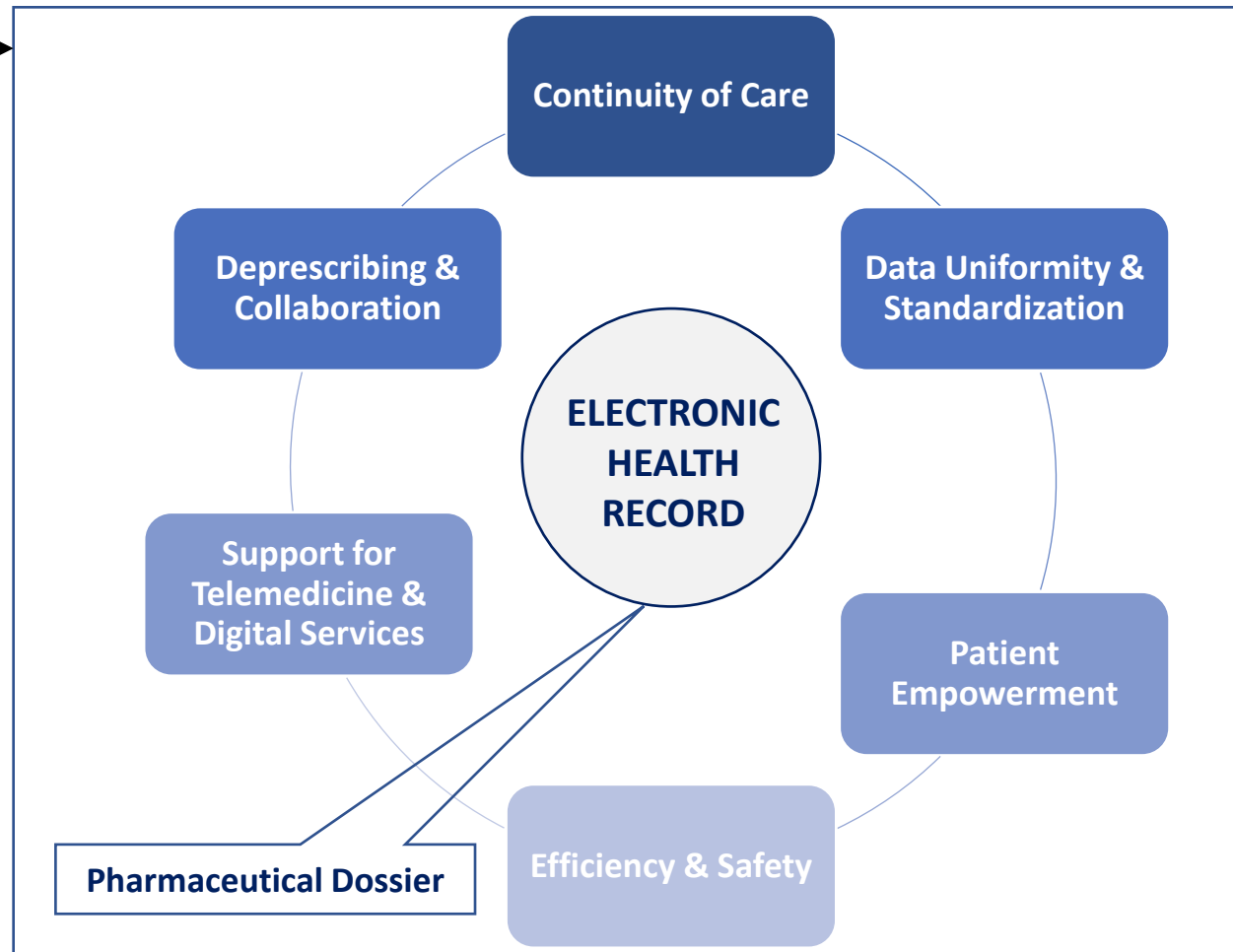
FSE

INNOVATION, RESEARCH, AND DIGITALIZATION OF HOSPITALS

modernizing hospital infrastructure, upgrading medical technologies, and expanding the Electronic Health Record (Fascicolo Sanitario Elettronico) nationwide.

1. Technological and digital updates

- 85% of general practitioners will contribute to the File by the end of 2025;
- all Regions and Autonomous Provinces will adopt and use the File by mid-2026.





Hospital-level digitalization



RFID and digitalized warehouses enhance inventory management, improve traceability of drugs and medical devices, and reduce errors and stock shortages. They also streamline logistics, supporting more efficient and safer hospital operations.



The electronic medical record (EMR) allows real-time sharing of patient data between hospital pharmacies and clinical departments, enabling fully coordinated care, accurate medication management, and enhanced patient safety.

Es. bedside therapy administration recording and real-time drug replenishment requests to the pharmacy.



Digitalization facilitates Mini-HTA by enabling systematic data collection, supporting research, and allowing robust analysis of therapies and medical devices for informed clinical decisions.

How Do Hospital Pharmacists Add Value in Today's Digital Health Landscape?

The role of Hospital pharmacists in the digitalization pathway

Collaboration with clinicians

Utilization of electronic medical records to **facilitate communication between hospital wards and pharmacy**, including **bedside therapy** administration recording and real-time drug replenishment requests to the pharmacy.

Management of oncological therapies

Digital prescription systems ensure accurate communication and effective risk management across the entire cancer treatment pathway—**from preparation to administration**

Patient discharge management

Ensuring the **appropriateness and optimization of discharge prescriptions** to promote continuity of care between hospital and community, aligned with the prescriptions uploaded to the **Electronic Health Record (EHR)**.

Logistics of medicines and medical devices

Efficient **management and tracking** of pharmaceutical products and medical devices through digital tools.

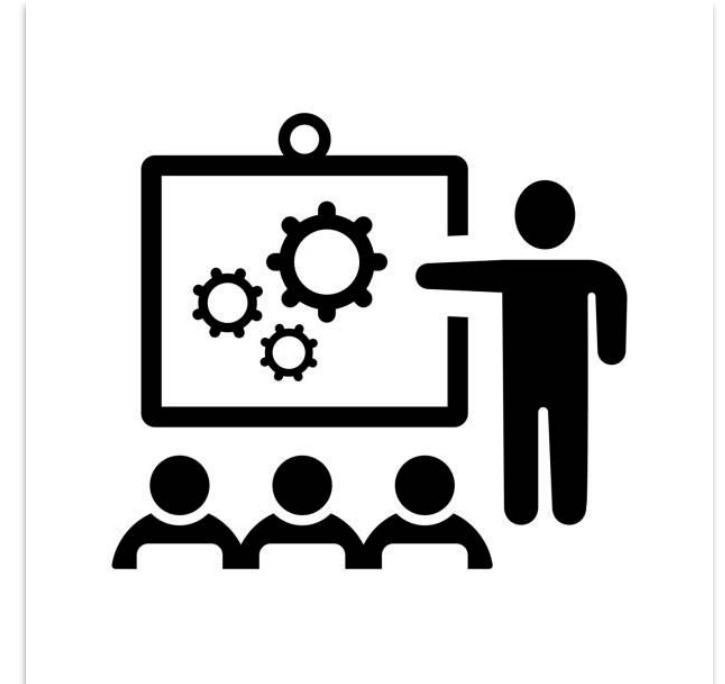
INNOVATION, RESEARCH, AND DIGITALIZATION OF HOSPITALS

modernizing hospital infrastructure, upgrading medical technologies, and expanding the Electronic Health Record (Fascicolo Sanitario Elettronico) nationwide.

2. Training, scientific research, and technology transfer

Training for Healthcare Managers and Staff

- Specialized training programs are established **to develop technical, digital, professional, and managerial skills** among health personnel.
- These programs include management courses for **healthcare** executives, infection-control training, and additional educational pathways for general practitioners and medical specialists.



The Hospital Pharmacist: A Key Healthcare Professional



Beyond Traditional Dispensing

Hospital pharmacists have evolved into essential clinical partners, playing a crucial role in modern healthcare delivery. Their expertise extends far beyond medication distribution to encompass comprehensive patient safety and therapeutic optimization.

Clinical Management

Advanced medication therapy management and personalized pharmaceutical care

Interprofessional Collaboration

Working closely with physicians, nurses, and allied health professionals in patient care teams

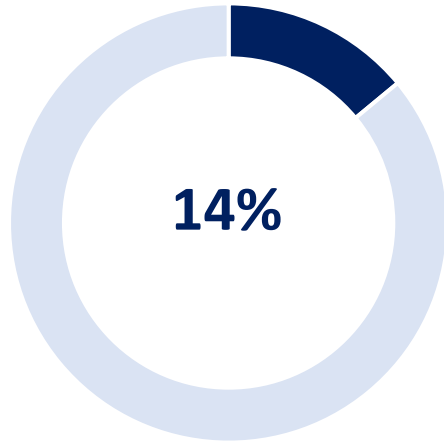
Safety & Optimization

Monitoring medication effects, preventing errors, and optimizing therapeutic outcomes

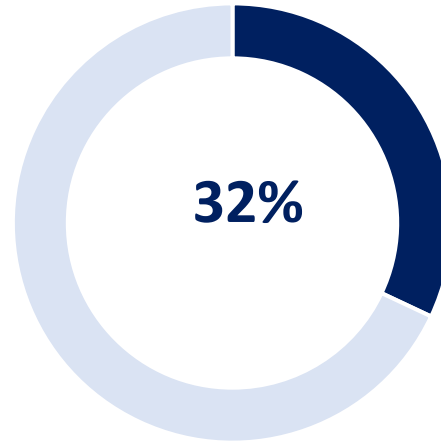
Patient & Team Education

Providing expert guidance on safe, effective drug use to patients and healthcare professionals

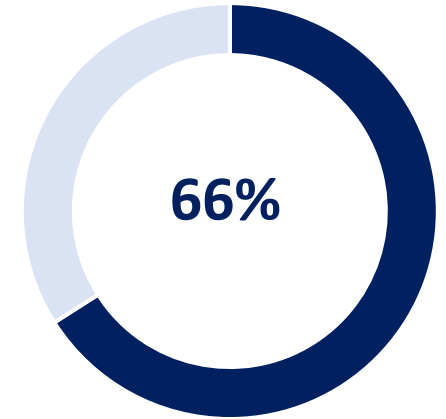
Evidence of Hospital Pharmacists' Impact



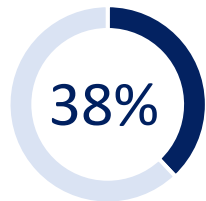
Reduction in Adverse drug Events¹



Reduction in Readmissions³



Reduction of Medication Discrepancies⁴



Reduction in Adverse Drug Events in Antibiotic Therapie²

1. Kelly WN, Ho MJ, Smith T, Bullers K, Bates DW, Kumar A. Association of Pharmacist Interventions With Adverse Drug Events and Potential Adverse Drug Events. *Pharmacoepidemiol Drug Saf.* 2024 Jul;33(7):e5853. doi: 10.1002/pds.5853. PMID: 38973415.
2. Suh Y, Ah YM, Chun HJ, Lee SM, Kim HS, Gu HJ, Kim AJ, Chung JE, Cho Y, Lee YH, Hwangbo SY, Kim J, Kim ES, Kim HB, Lee E, Lee JY. Potential Impact of the Involvement of Clinical Pharmacists in Antimicrobial Stewardship Programs on the Incidence of Antimicrobial-Related Adverse Events in Hospitalized Patients: A Multicenter Retrospective Study. *Antibiotics (Basel).* 2021 Jul 14;10(7):853. doi: 10.3390/antibiotics10070853. PMID: 34356774; PMCID: PMC8300750.
3. Ruiz-Ramos J, Hernández MH, Juanes-Borrego AM, Milà R, Mangués-Bafalluy MA, Mestres C. The Impact of Pharmaceutical Care in Multidisciplinary Teams on Health Outcomes: Systematic Review and Meta-Analysis. *J Am Med Dir Assoc.* 2021 Dec;22(12):2518-2526. doi: 10.1016/j.jamda.2021.05.038. Epub 2021 Jul 3. PMID: 34228962.
4. Mekonnen AB, McLachlan AJ, Brien JA. Pharmacy-led medication reconciliation programmes at hospital transitions: a systematic review and meta-analysis. *J Clin Pharm Ther.* 2016 Apr;41(2):128-44. doi: 10.1111/jcpt.12364. Epub 2016 Feb 23. PMID: 26913812.



Conclusion: SIFO point of view



Historic Transformation

The PNRR represents an unprecedented opportunity to modernize and strengthen Italy's entire healthcare system for future generations



Pharmacists as Catalysts

Hospital pharmacists are pivotal professionals in delivering safer, more efficient, and patient-centered pharmaceutical care



Strategic Investment

Expanding pharmacists' roles creates benefits for patients, healthcare providers, and the sustainability of the entire system

Together, we can build a resilient, innovative, and sustainable healthcare future for Italy—with hospital pharmacists as essential partners in this transformation.



***THANK YOU FOR
YOUR ATTENTION***