

eHealth and Pharmacy – Recent Developments in Policy & Practice

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What is PGEU?



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Pharmaceutical Group of European Union

Members: Professional Bodies & Pharmacists' Associations



-  Austria
-  Belgium
-  Bulgaria
-  Croatia
-  Cyprus
-  Czech Rep
-  Denmark
-  Estonia
-  Finland
-  France
-  Germany
-  Greece
-  Hungary
-  Ireland
-  Italy
-  Luxembourg
-  Malta
-  Netherlands
-  Poland
-  Portugal
-  Romania
-  Slovakia
-  Slovenia
-  Spain
-  Sweden
-  United Kingdom
-  Bosnia Herzegovina
-  FYR Macedonia
-  Norway
-  Serbia
-  Switzerland
-  Turkey

PGEU's Area of Work

-  Recently closed dossier
-  Ongoing...
-  To watch in 2016 & 2017
-  New dossier



EMVS



Professional Recognition Directive



Falsified Medicines Directive



Medical Devices Regulation



HTA



Health Claims on Botanicals



Waste Directive



Veterinary medicines



Trade agreements



European semester!



VAT

PGEU's Area of Work



EUROPEAN ANTIBIOTIC AWARENESS DAY



A European Health Initiative



EAACI
EUROPEAN ACADEMY OF ALLERGY AND CLINICAL IMMUNOLOGY

#medsdisposal
easier than you think



pharmacy™



EC Expert & Stakeholder Groups...
eHealth, PS, HWF, Self care etc..

A note on terminology

teleHealth

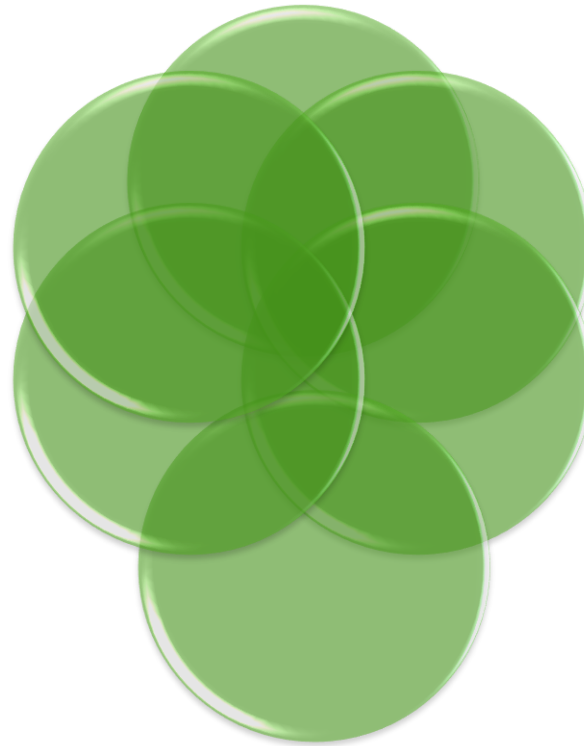
eHealth

mHealth

ePrescribing

eDispensing

tele/e/m/Whatever....



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Presentation Overview

1. Policy Developments

- EU and Global Policy Developments
- Overview of EU-funded eHealth Projects
- EU Project Examples

2. eHealth in the Pharmacy

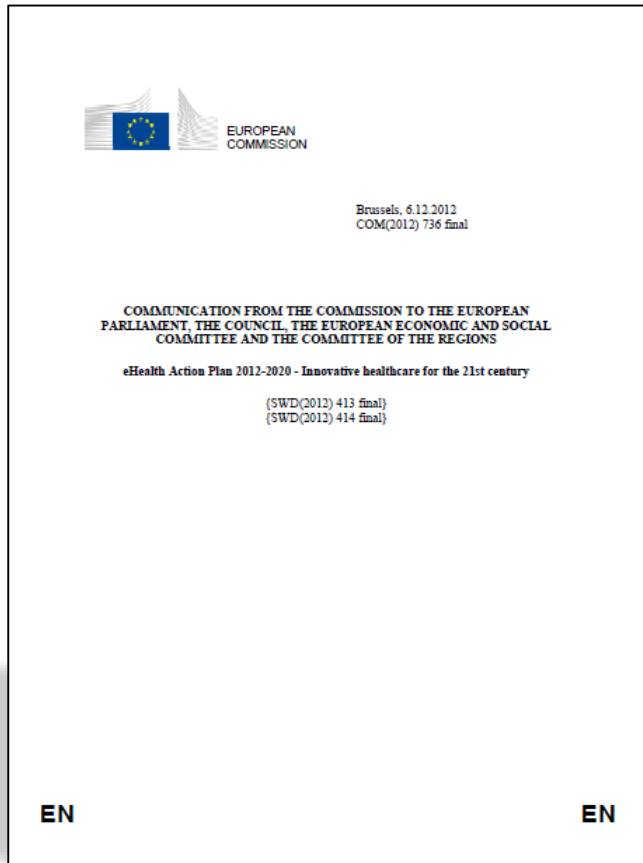
- Insights from Research
- Reality Check
- PGEU eHealth Policy

3. Examples from Practice

- Shared-care Records
- Pharmacy: Entry Point for the Health System
- Adherence Services
- ePrescribing and eDispensing
- The New Paradigm: mHealth

4. Concluding Remarks

1. Policy Developments: (i) EU & Global



EC eHealth Action Plan 2012-2020

**Better health and
better and safer care
for EU citizens**

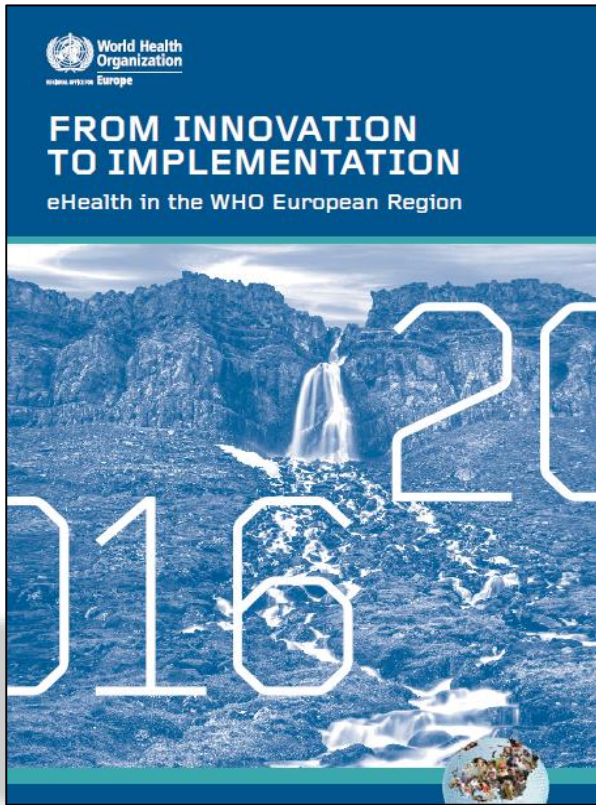
ePrescriptions!



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1. Policy Developments: (i) EU & Global



eHealth in the
WHO Euro
Region

Legislation on
electronic
health records

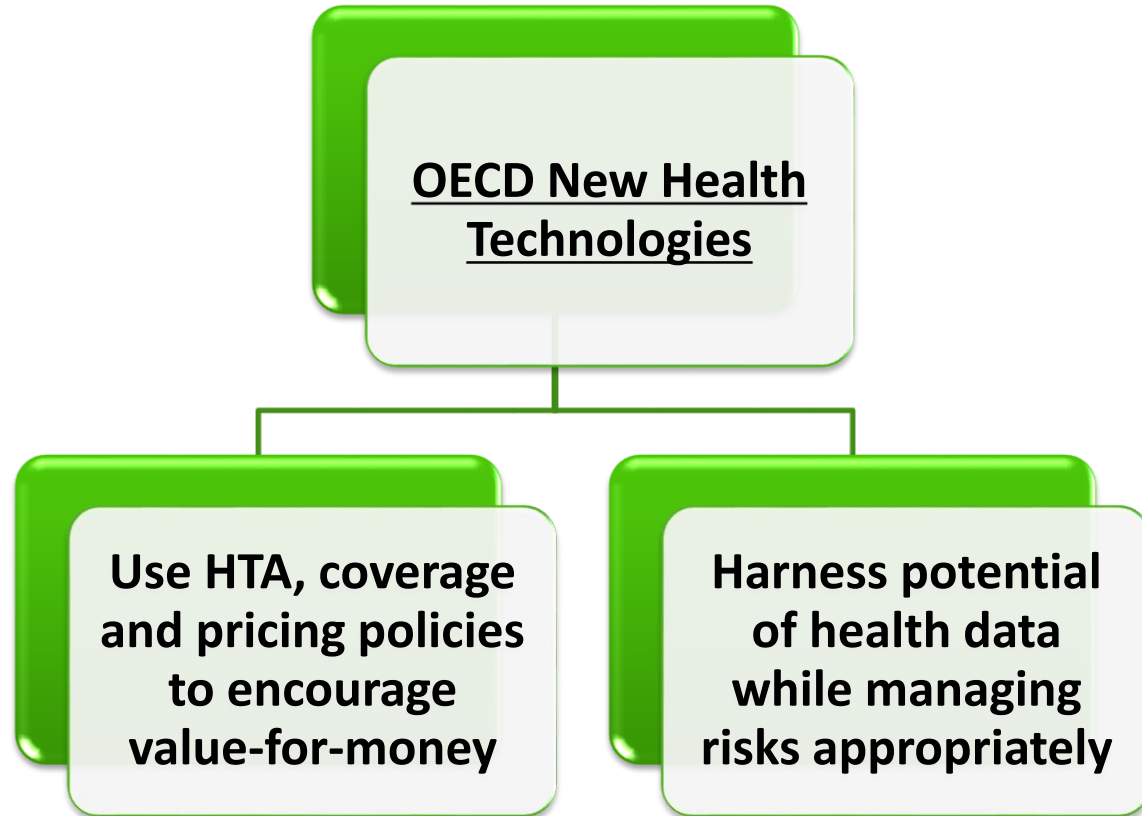
Regulation in
mHealth

1. Policy Developments: (i) EU & Global

**New Health Technologies:
Managing Access, Value
and Sustainability**



<http://www.oecd.org/health/management/technologies/health/528066668.pdf>



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1. Policy Developments: (ii) Overview of EU-Funded eHealth Projects



- Mental health
- Pain
- Parkinson's and Alzheimer's disease
- Stroke
- Respiratory
- Cardiovascular disorders
- Diabetes
- Cancer
- Paediatrics
- Sight and hearing
- Gastroenterology and incontinence
- Sexual health
- Rehabilitation
- Personal health
- Preventive healthcare
- Mobile health
- Clinical trials and biomedical informatics
- Anesthesia
- Patient safety
- Knowledge sharing & infrastructure for eHealth
- Telemedicine
- Patient empowerment
- eHealth services
- Interoperability & cross-border healthcare
- Clinical research
- Innovation procurement
- International projects in low & middle income countries

+75 recently completed or ongoing projects

1. Policy Developments: (iii) EU Project Examples - JAsEHN & WEB-RADR



JASEHN
Joint Action to Support the eHealth Network

All 28 EU Member States

Develop political recommendations and instruments for cooperation priority areas

<http://jasehn.eu/>



WEB-RADR

Mobile app: reporting *suspected* ADRs to EU regulators

Feedback following ADR is more relevant

<https://web-radr.eu/>

2. eHealth in the Pharmacy: (i) Insights from Research

Linn 2011:

JOURNAL OF MEDICAL INTERNET RESEARCH Linn et al
Review
Effects of eHealth Interventions on Medication Adherence: A Systematic Review of the Literature
Annemiek J Linn¹, MSc; Marcia Vervloet², MSc; Liset van Dijk³, PhD; Edith G Smit¹, PhD; Julia CM Van Weert¹, PhD

Oh et al 2005:

JOURNAL OF MEDICAL INTERNET RESEARCH Oh et al
Review
What Is eHealth (3): A Systematic Review of Published Definitions
Hans Oh^{1,2}, BSc; Carlos Rizo^{1,2}, MD; Murray Enkin¹, MD; Alejandro Jadad^{1,2}, MD, DPhil
¹Centre for Global eHealth Innovation, University Health Network, Toronto ON, Canada
²Department of Health Policy Management and Evaluation, University of Toronto, Toronto ON, Canada

Della Mea 2001:

JOURNAL OF MEDICAL INTERNET RESEARCH Della Mea
Editorial
What is e-Health (2): The death of telemedicine?
Vincenzo Della Mea
(J Med Internet Res 2001;3(2):e22) doi:10.2196/jmir.3.2.e22

Eysenbach 2001:

JOURNAL OF MEDICAL INTERNET RESEARCH Eysenbach
Editorial
What is e-health?
G Eysenbach
(J Med Internet Res 2001;3(2):e20) doi:10.2196/jmir.3.2.e20

Promising results but still quality issues

Realisation eHealth is a thing

The death of telemedicine?

What is eHealth?

2. eHealth in the Pharmacy: (i) Insights from Research

Adherence, ePrescribing & Patient Safety

Rinner et al 2015:

Research Article
Effects of Shared Electronic Health Record Systems on Drug-Drug Interaction and Duplication Warning Detection

Christoph Rinner,¹ Wilfried Grossmann,² Simone Katja Sauter,¹ Michael Wolzt,³ and Walter Gall¹

Brennan et al 2015:



Research article

National health models and the adoption of eHealth and ePrescribing in primary care – new evidence from Europe

Cite this article: Brennan J, McElligott A, Power N. National health models and the adoption of eHealth and ePrescribing in primary care – new evidence from Europe. *J Innov Health Inform*. 2015;2(2):159-168. <https://doi.org/10.10236/2284-07>

James Brennan
Department of Computer Science and Information Systems, Faculty of Science and Engineering, University of Limerick, Ireland

Annette McElligott
Department of Computer Science and Information Systems, Faculty of Science and Engineering, University of Limerick, Ireland

Norah Power
Department of Computer Science and Information Systems, Faculty of Science and Engineering, University of Limerick, Ireland

Linn et al 2012:



1 + 1 = 3? The systematic development of a theoretical and evidence-based tailored multimedia intervention to improve medication adherence

Annetiek J. Linn^{a,*}, Julia C.M. van Weert^a, Edith G. Smit^c, Kate Perry^c, Liset van Dijk^b

^a Amsterdam School of Communication Research (ASCoR), University of Amsterdam, Amsterdam, The Netherlands
^b Department Pharmaceutical Care, Netherlands Institute for Health Services Research, Utrecht, The Netherlands
^c Department Health Psychology, Eindhoven HealthCare, Eindhoven, The Netherlands

Framework develop a tailored multimedia intervention for adherence

1/3 of European GPs utilise ePrescribing

Patient safety is improved with eHRs



2. eHealth in the Pharmacy: (i) Insights from Research

Inter-disciplinary education, data-sharing & greater integration

Roehrs et al 2017:



Rinner et al 2016:



Mossialos et al 2015:



From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management

Elias Mossialos^{a,*}, Emilie Courtin^b, Huseyin Naci^c, Shalom Benrimoj^b, Marcel Bouvy^c, Karen Farris^d, Peter Noyce^e, Ingrid Sketris^f



Role of community pharmacists in chronic disease management

Health information exchange can address fragmentation

Systematic review of personal health records



Question.....

Is tele/e/m/online Banking the same as tele/e/mHealth?



<http://internetbankings.info/wp-content/uploads/2016/04/INTERNET-BANKING.jpg>



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Answers.....

“Responsibility for medicines and pharmaceutical products will stay with the Directorate-General for Health because I agree with you that medicines are not goods like any other.”

- Jean-Claude Juncker, President of the European Commission , 2014-2019

<http://www.eesc.europa.eu/resources/docs/jean-claude-juncker---political-guidelines.pdf>

2. eHealth in the Pharmacy: (ii) PGEU eHealth Policy



PGEU 2016 eHealth Statement Annex: 25 practices from 14 European countries (not exhaustive)

<http://pgeu.eu/en/policy/9:e-health.html>

2. eHealth in the Pharmacy: (ii) PGEU eHealth Policy

Engage with pharmacists

eHealth should be integrated into health systems

eHRs should be linked with ePrescribing systems

Meaningfully involve end users

Pharmacy should be recognised, supported and reimbursed for improved health outcomes and reduced healthcare costs.

<http://pgeu.eu/en/policy/9:e-health.html>

3. Examples from Practice

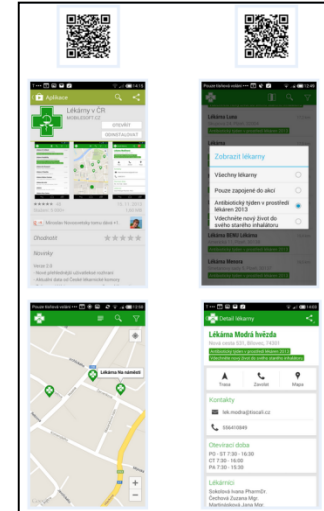


Download on the App Store ANDROID APP ON Google play

Download hier gratis de apps *Apotheek van wacht*

Pas de médecin? La pharmacie netCare a la solution.

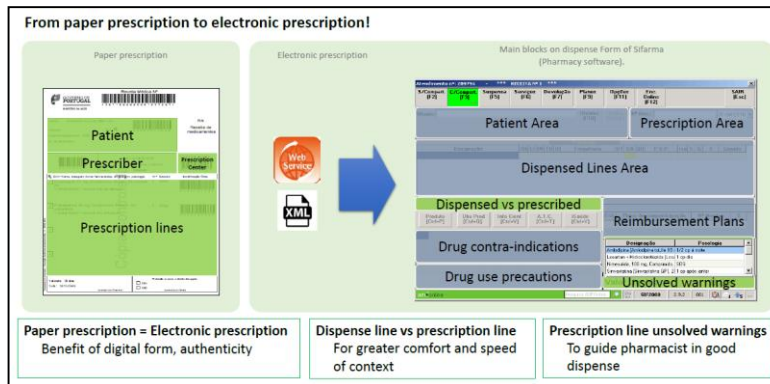
Vous pouvez désormais consulter un médecin à peu de frais et sans rendez-vous dans toutes les pharmacies portant le symbole netCare. www.netCare-pharmacie.ch



Spørg apoteket om din medicin døgnet rundt

Chat direkte

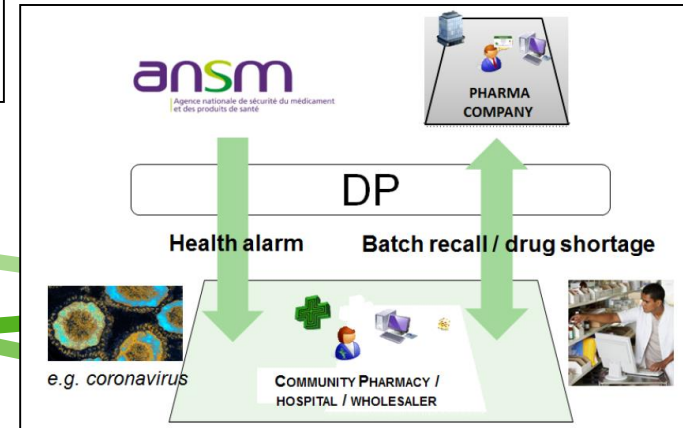
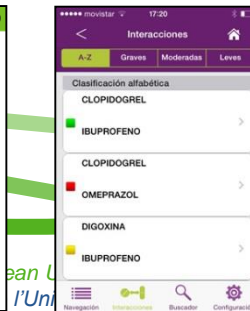
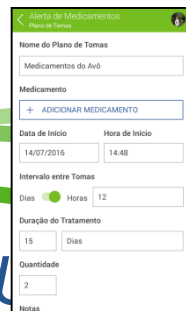
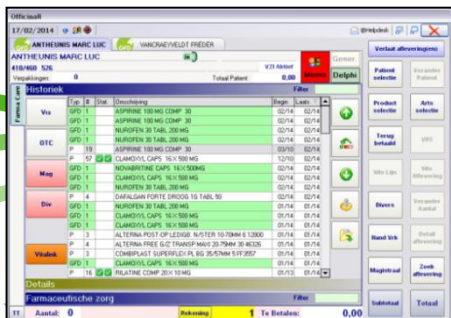
eller ring på tlf. 8020 2407



Bulgarian Pharmacy Mapping

Карта на аптеките и дрогерите в България

www.mApteka.bg



3. Examples from Practice: (i) Shared-care Records

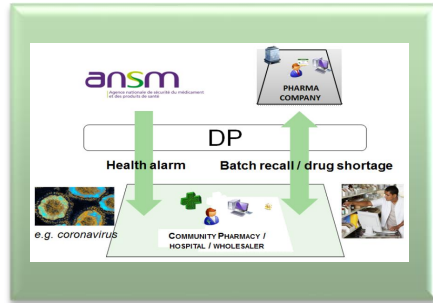
Dossier Pharmaceutique
Partagé: Belgium

Shared medication record

- Prescription or OTC
- Interactions, abuse, duplication, adherence
- Integrated to existing pharmacy software
- 75% of Belgian pharmacists
- 60% of the Belgian population

The screenshot displays a software interface for a shared medication record. At the top, it shows the date '17/02/2014' and the patient's name 'ANTHEUNIS MARC LUC'. Below this, there is a table with columns for 'Vw', 'GFD', 'Dose', 'Uitschrijving', 'Begin', and 'Einde'. The table lists various medications such as 'ASPIRINE 100 MG COMP 30', 'NUROFEN 30 TABL 200 MG', 'CLAMOXYL CAPS 16x500 MG', and 'DAPAGLAN FORTE DROEG 10 TABL 50'. To the right of the table, there are several buttons for actions like 'Product selectie', 'Arts selectie', 'Teng detail', 'Wiss. Lijst', 'Wiss. Aflevering', 'Nieuw', 'Hand Wik', 'Mogelijk ad', and 'Ziek aflevering'. At the bottom, there is a summary bar with 'Aantal: 0', 'Rekening: 1', and 'Te betalen: 0,00'.

3. Examples from Practice: (i) Shared-care Records



Dossier Pharmaceutique: France

- Shared medication record
- Legal framework 2007
- ~100% pharmacists, 50% of population
- 330 million data shares
- +100 'alarm bells' / recalls
- Read / write access
- Soon: hospital physicians
- Two studies: DP helped pharmacists detect interactions and contraindications (often OTCs and common Rx)

<http://www.ordre.pharmacien.fr/Communications/Communiqués-de-presse/Evaluation-du-DP-de-sa-mise-en-oeuvre-aux-Interventions-Pharmaceutiques>

3. Examples from Practice: (i) Shared-care Records



Summary Care Records (SCRs): UK

Summary of medicines, allergies and ADRs

Authorised only, patient's consent

First step to read-and-write access to full eHR

Proof of concept report:

http://systems.hscic.gov.uk/scr/library/poc_report.pdf

92% of cases avoided referral to other HCP

18% of cases avoided risk of prescribing error

92% of pharmacists agree or strongly agree that SCR has improved the service to patients

3. Examples from Practice: (ii) Pharmacy as the entry point for to the health system

Italian “Platform”

- Link between primary & secondary care

- Book nurses, physiotherapists, specialist doctors in the pharmacy

- Facilitate future PhCare services & DP

3. Examples from Practice: (ii) Pharmacy as the entry point for to the health system



**netCare:
Switzerland**

Collaboration

Between GPs & community pharmacists

Pharmacy

Point of access to the HC system

Triage

Done in the pharmacy, by the pharmacist

Validated

Decision tree by physicians

Follow-up call for evaluation

Training

Extensive training and CPD provided

3. Examples from Practice: (ii) Pharmacy as the entry point for to the health system

**netCare:
Switzerland**

Treatment options:

- **Treatment by the pharmacist**
- **Video consultation with a physician**
- **Referral to a physician**

**Pas de
médecin ?
La pharmacie
netCare a la
solution.**



Vous pouvez désormais consulter un médecin à peu de frais et sans rendez-vous dans toutes les pharmacies portant le symbole netCare. www.netCare-pharmacie.ch

https://www.medetel.eu/download/2015/parallel_sessions/presentation/day3/NetCare_telemed_eng_2.pdf



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3. Examples from Practice: (ii) Pharmacy as the entry point for to the health system

netCare: Switzerland - Outcomes



- 73% of cases dealt by pharmacists,
- 20% by physicians teleconsultation
- 7% referred to acute care



- Improvement of practice, satisfaction & pharmacist's position
- Increase coverage of healthcare, reduction in health inequalities

3. Examples from Practice: (iii) Adherence Services

New Medicine Service (NMS): UK

- Targeted: LTCs
- CVD
- Diabetes
- Hypertension
- Asthma
- Anticoag
- Anti-platelet

2 weeks:
in-pharmacy
or telephone
consultation

- Contact doctor
OR
- Provide advice
and arrange
final consult
(2 weeks)

Opportunity
for pharmacist
to provide
dietary and
healthy
lifestyle
advice

Proven cost
effective
Improves
adherence
by 10%

<http://psnc.org.uk/services-commissioning/advanced-services/nms/>
<http://psnc.org.uk/funding-and-statistics/nhs-statistics/nms-statistics/>
<http://psnc.org.uk/funding-and-statistics/nhs-statistics/nms-statistics/>
<http://www.nottingham.ac.uk/~pazmjb/nms/>



3. Examples from Practice: (iii)

Adherence Services

DO-PILL: France

Smart ePill Box Connected to the Pharmacy



- Data updated when dispensed
- Alarm & lights for due dose
- Alarm sounds if patient opens the wrong compartment
- Pharmacist informed when compartment opened
- On Rx: 3 projects a) Transplant b) Epilepsy c) Leukaemia



3. Examples from Practice: (iv) ePrescribing and eDispensing

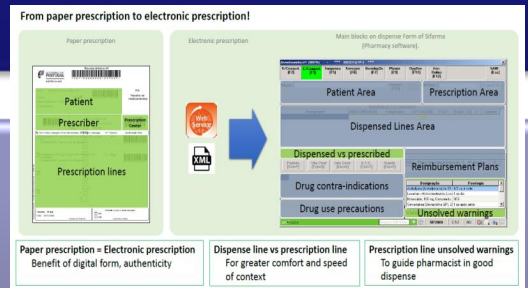
ePrescribing: Portugal

Benefits:
pharmacists

- Minimise dispensing errors
- Better integration
- Reduced admin burden
- Lower costs
- Integrated with reimbursement

Benefits:
patients

- Safety
- Confidentiality
- Mobility and convenience
- Integration



3. Examples from Practice: (iv) ePrescribing and eDispensing

ePrescribing: Portugal

From paper prescription to electronic prescription!

Paper prescription

The image shows a paper prescription form with a header for 'Farmácia Sifarma' and a barcode. The main body is divided into three green sections: 'Patient', 'Prescriber', and 'Prescription lines'. The 'Prescription lines' section contains several lines of text and barcodes.

Electronic prescription

Main blocks on dispense form of Sifarma (Pharmacy software).

The screenshot shows a software interface with a top menu bar containing items like 'S/Comput', 'L/Comput', 'Suporçoes', 'Suporte', 'Desenvolvimento', 'Planos', 'Registos', 'Frm. Ordens', and 'SAH'. Below the menu are several main blocks: 'Patient Area', 'Prescription Area', 'Dispersed Lines Area', 'Dispersed vs prescribed', 'Reimbursement Plans', 'Drug contra-indications', 'Drug use precautions', and 'Unsolved warnings'. A 'Web Service' icon and an 'XML' icon are shown to the left of a large blue arrow pointing towards the software interface.

Paper prescription = Electronic prescription
Benefit of digital form, authenticity

Dispense line vs prescription line
For greater comfort and speed of context

Prescription line unsolved warnings
To guide pharmacist in good dispense

3. Examples from Practice: (v) The New Paradigm of mHealth

BOT PLUS 2.0: Spain



- Meds, devices & health
- Dispensing support msgs, pictograms, interactions
- Module for PhCare Services
 - Record dispensing info, minor ailments and Medicines Review with Follow-up Service
- Search: brand, generic, national code, ATC code & MA holder
- Filter for renal / hepatic impairment & pregnancy / lactation
- .pdf download of SmPCs

3. Examples from Practice: (v) The New Paradigm of mHealth

Various other apps have been created by pharmacists/pharmacies in.....

Austria, Belgium, Bulgaria, Czech Republic, Denmark, Portugal, Sweden and the UK

Functions:

**Locate a pharmacy
Check stock
Order an OTC
Video consultation
Monitor blood _____
Vaccine & medication reminders
And much more.....**

4. Concluding Remarks


eHealth (teleHealth, eHealth and mHealth) is here to stay, but it does not replace the role of the practitioner, but complements their practice



Pharmacists are increasingly engaging in eHealth activities and services to benefit their patients, payers, health systems, governments and their own practice



Policy makers, payers and governments have realised the potential contribution to patient care and financial benefits of eHealth activities and services



Now is the time to act to ensure pharmacists/pharmacies are included in these developments and national action plans for eHealth



Hvala lepa!

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