Designing comprehensive smoking cessation services

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Annual deaths from smoking

- Smoking kills about 69,000 people a year in Poland

- About 43,000 die in middle age from smoking

- Many of those killed in middle age would have lived on for 10, 20, 30 or more good years

- About 22 years of life are lost, on average, by those killed in middle age by smoking

Economic loss in Poland

57 bln PLN/year

7 bln for medical treatment

50 bln - productivity loss

OPEN ACCESS

Global economic cost of smoking-attributable diseases

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ABSTRACT

Background The detrimental impact of smoking on health has been widely documented since the 1960s. Numerous studies have also quantified the economic cost that smoking imposes on society. However, these studies have mostly been in high income countries, with limited documentation from developing countries. The aim of this paper is to measure the economic cost of smoking-attributable diseases in countries throughout the world, including in low- and middle-income settings. **Methods** The Cost of Illness approach is used to estimate the economic cost of smoking attributable-diseases in 2012. Under this approach, economic costs are defined as either 'direct costs' such as hospital fees or 'indirect costs' representing the productivity loss from morbidity and mortality. The same method was applied to 152 countries, which had all the necessary data, representing 97% of the world's smokers. **Findings** The amount of healthcare expenditure due to smoking-attributable diseases totalled purchasing power parity (PPP) $467 billion (US$422 billion) in 2012, or 5.7% of global health expenditure. The total economic cost of smoking (from health expenditures and productivity losses together) totalled PPP $1852 billion (US$1436 billion) in 2012, equivalent in magnitude to 1.8% of the world's annual gross domestic product (GDP). Almost 40% of this cost occurred in developing countries, highlighting the substantial burden these countries suffer. **Conclusions** Smoking imposes a heavy economic burden throughout the world, particularly in Europe and North America, where the tobacco epidemic is most advanced. These findings highlight the urgent need for countries to implement stronger tobacco control measures to address these costs.

NCDs impose through impoverishment from long-term treatment costs, and from productivity losses that threaten household incomes and the economies of Member States'. In 2015, the UN General Assembly also adopted the 2030 Agenda for Sustainable Development.[5] It includes 17 Goals (sustainable development goals (SDGs)) that all Member States have agreed to achieve by 2030. SDG 3 to 'ensure healthy lives and promoting well-being for all ages' includes target 3.4 to reduce by one-third premature mortality from NCDs, and target 3.a to strengthen country implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC).[5–7]

The WHO has previously noted that—despite some good progress—many countries have yet to introduce tobacco control measures at their highest level of implementation. This has left their populations at increased risk from tobacco use and secondhand smoke exposure, with the illness, disability and death they cause.[8] All countries have the ability to implement proven cost-effective tobacco control policies to protect the health of their citizens.[9 10] Tobacco control can potentially make a significant contribution towards the achievement of development priorities such as the SDGs.

The aim of this study is to measure the global economic cost of smoking-attributable diseases (ie, those caused by direct exposure to smoking). These findings will highlight the need for countries to implement more comprehensive tobacco control measures to address these economic costs, while also helping to achieve global development priorities under the SDGs.

INTRODUCTION

The detrimental impact of smoking on physical health and well-being has been widely documented throughout the world since the early 1960s.[1 2] Numerous studies have also quantified the eco-

METHODS

This study adopts a classic Cost of Illness approach to modelling the economic impact of an illness as developed by Rice and colleagues in the 1960s.[3] Under this approach, the gross economic impact of an illness is divided into 'direct costs' incurred in a

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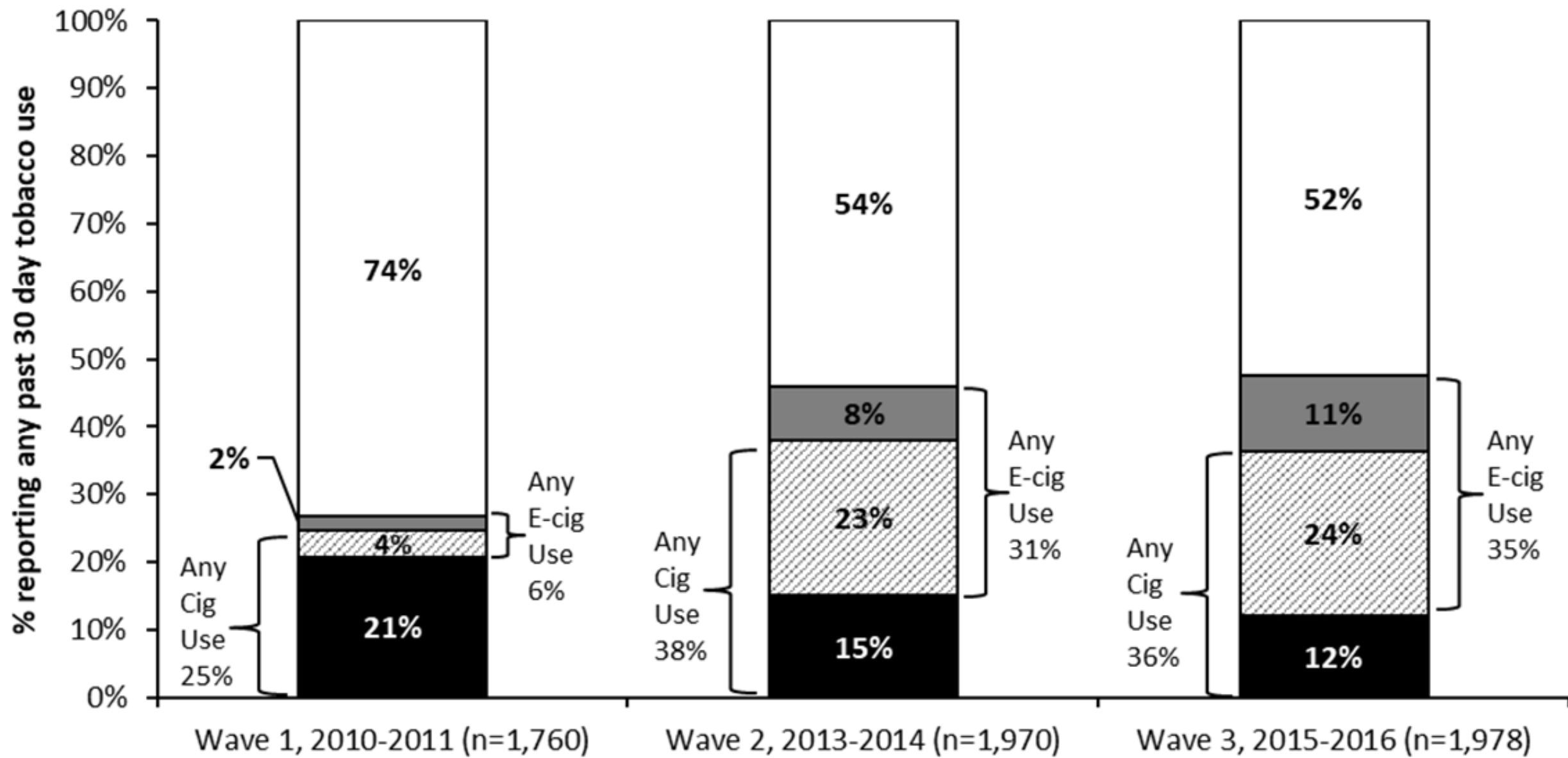zniżka 5 zł na zakup
kolejnej książki w cenie min. 30 zł*

plus

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TYM WIĘCEJ
ZYSKUJESZ
DOŁADOWANIE TELEFONU

Uprzejmie
informujemy

% reporting any past 30 day tobacco use (y-axis)

Wave 1, 2010-2011 (n=1,760)
- 74% — No Past 30 Day Tobacco Use
- 2% — Past 30 Day E-cigarette Use
- 4% — Past 30 Dual Use
- 21% — Past 30 Day Cigarette Use
- Any Cig Use 25%
- Any E-cig Use 6%

Wave 2, 2013-2014 (n=1,970)
- 54% — No Past 30 Day Tobacco Use
- 8% — Past 30 Day E-cigarette Use
- 23% — Past 30 Dual Use
- 15% — Past 30 Day Cigarette Use
- Any Cig Use 38%
- Any E-cig Use 31%

Wave 3, 2015-2016 (n=1,978)
- 52% — No Past 30 Day Tobacco Use
- 11% — Past 30 Day E-cigarette Use
- 24% — Past 30 Dual Use
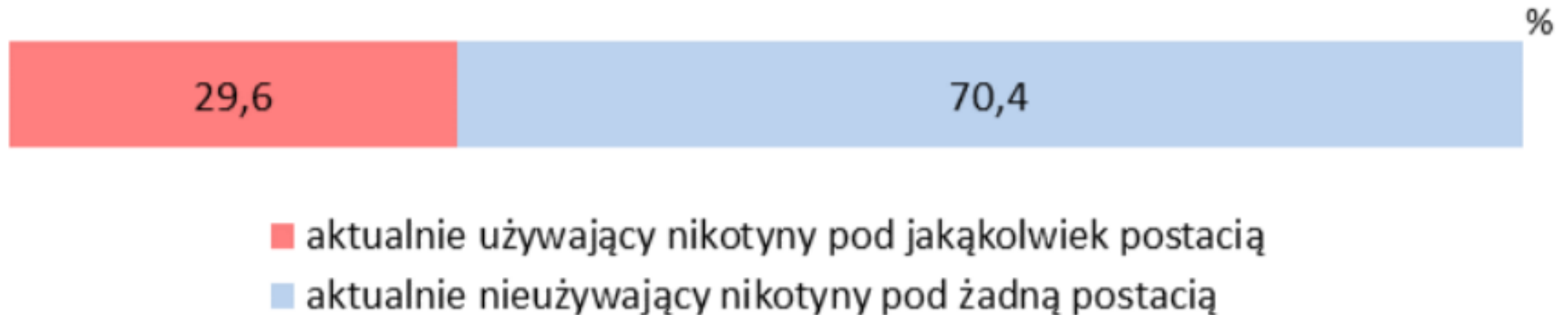- 12% — Past 30 Day Cigarette Use
- Any Cig Use 36%
- Any E-cig Use 35%

Legend: ■ Past 30 Day Cigarette Use ▨ Past 30 Dual Use ▦ Past 30 Day E-cigarette Use □ No Past 30 Day Tobacco Use

Nicotine users in Poland

Używanie nikotyny wśród ogółu dorosłych Polaków

%

29,6	70,4

■ aktualnie używający nikotyny pod jakąkolwiek postacią
■ aktualnie nieużywający nikotyny pod żadną postacią
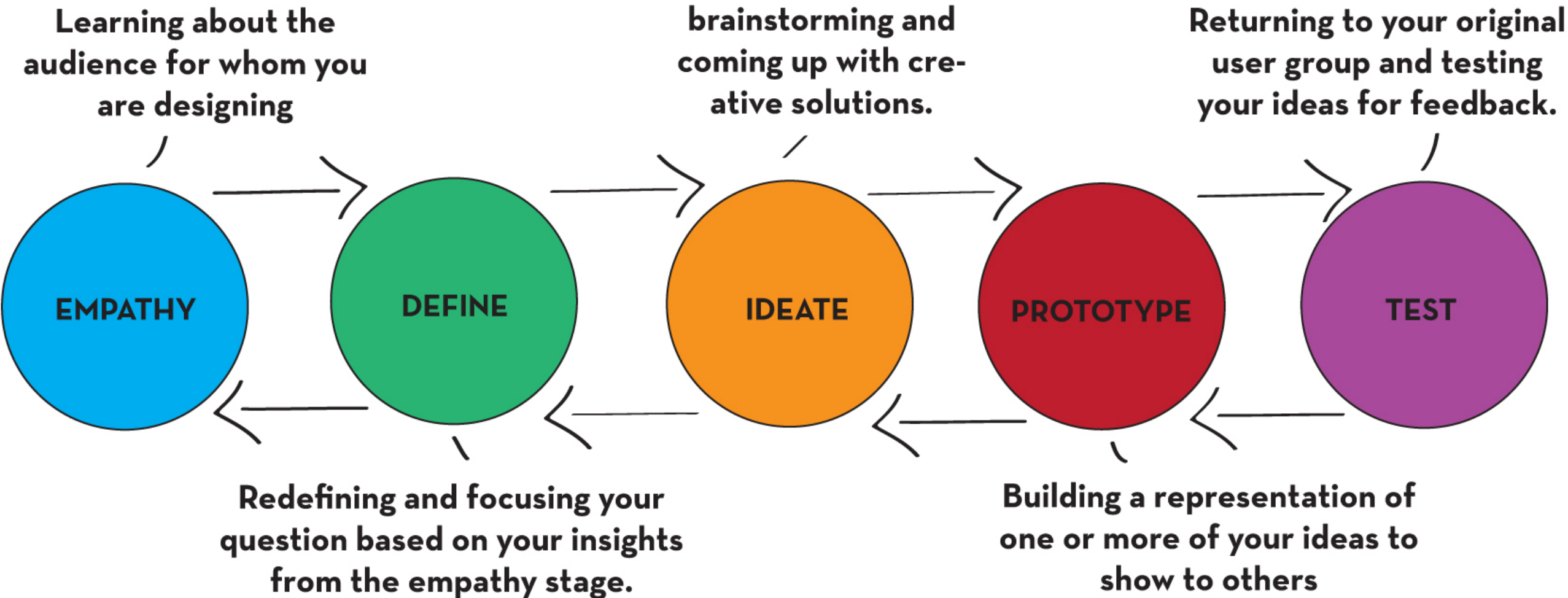
Help for smokers in Poland

Number of smoking cessation service providers:

- Primary health care – **94 out of** 6626
- Specialistic out patient clinics – **10**

- No tobacco cessation services in hospitals

- source: https://zip.nfz.gov.pl/GSL/GSL/ProgramyProfilaktyczne (2018)
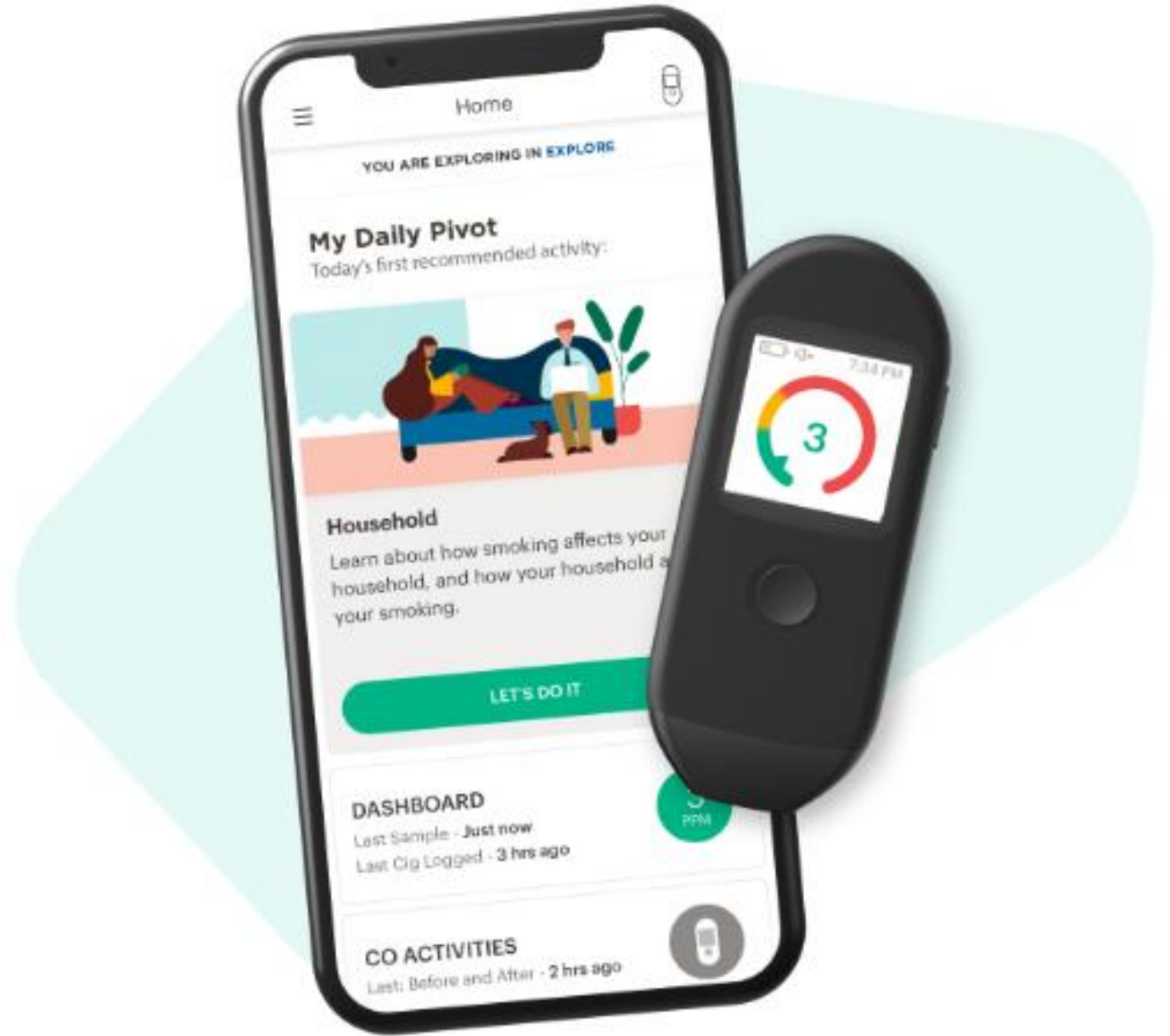
Design Thinking

Learning about the audience for whom you are designing

brainstorming and coming up with creative solutions.

Returning to your original user group and testing your ideas for feedback.

EMPATHY

DEFINE

IDEATE

PROTOTYPE

TEST

Redefining and focusing your question based on your insights from the empathy stage.

Building a representation of one or more of your ideas to show to others

Empathy

Define

Ideate

Prototype

test

<u>Original Paper</u>

Initial Assessment of a Comprehensive Digital Smoking Cessation Program That Incorporates a Mobile App, Breath Sensor, and Coaching: Cohort Study

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EXPERT CONSENSUS DECISION PATHWAY

2018 ACC Expert Consensus Decision Pathway on Tobacco Cessation Treatment

A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents

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NICE National Institute for Health and Care Excellence

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Stop smoking interventions and services

NICE guideline [NG92]   Published date: March 2018   Uptake of this guidance

Guidance | Tools and resources | Information for the public | Evidence | History

- Overview
- **Recommendations**
- Putting this guideline into practice
- Context
- Rationale and impact
- Recommendations for research
- Update information

Guidance

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Next

Recommendations

1.1 Commissioning and providing stop smoking interventions and services to meet local needs
1.2 Monitoring stop smoking services
1.3 Evidence-based stop smoking interventions
1.4 Engaging with people who smoke
1.5 Advice on e-cigarettes
1.6 If a person who smokes wants to quit
1.7 If a person who smokes is not ready to quit
1.8 Telephone quitlines
1.9 Education and training
1.10 Campaigns to promote awareness of local stop smoking services
1.11 Closed institutions
1.12 Employers

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mentality

- Tobacco dependence is a chronic relapsing disorder that should be treated in every patient with optional opting out (instead of asking if he/she is ready to be treated (just like diabetes or hypertension)

Why?

- **Quitting smoking** results in **greater reductions** in CVD mortality **than any other secondary prevention measure**, including the use of **β-blockers, angiotensin-converting enzyme inhibitors, statins or aspirin**.

- Moreover, the benefits of antihypertensive or lipid lowering drugs are significantly **reduced** in those who continue to smoke.

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High risk groups

- People with mental health problems
- Cardiologic patients
- Pregnant women
- COPD and asthma patients
- Diabetic patients
- Lung cancer patients (ldCT screening)

Other occasions to catch smokers

- Occupational health check ups

- Workplace programmes

- Screening programmes (cervical, breast, colon cancer)

Tobacco use status

- Do you ever **use** any tobacco product?

Heaviness of Smoking Index over Fagestroom (ACC)

TABLE 1 — **Heaviness of Smoking Index: 2 Questions to Assess a Smoker's Degree of Nicotine Dependence**

How many cigarettes do you smoke?
- 0: 10 or fewer
- 1: 11–20
- 2: 21–30
- 3: ≥31

How soon after waking up do you smoke your first cigarette of the day?
- 0: After 60 minutes
- 1: 31–60 minutes
- 2: 6–30 minutes
- 3: within 5 minutes

Level of nicotine dependence is computed by adding the scores together as follows:
- 0–2 = low nicotine dependence
- 3–4 = moderate nicotine dependence
- 5–6 = high nicotine dependence

evidence-based interventions

- very brief advice
- behavioural support (individual and group)
- bupropion
- nicotine replacement therapy (NRT) – short and long acting
- varenicline
- cytisine - still not recognized widely but used effectively in CEE countries

- Prescriptions should be written even for over-the-counter medications reinforcing the importance of using the medication, and automatically documenting it in the patient's EHR

Fharmacotherapy and hospitalization

- Treat hospitalized patient with NRT even when they are not ready to quit

- Among hospitalized smokers, starting smoking cessation counseling in the hospital and continuing it for at least 1 month after discharge increases long-term quit rates by 37% (ACC)

Monitoring stop smoking services

According to NICE

- treating at least 5% of the estimated local population who smoke each year

- achieving a successful quit rate of at least 35% at 4 weeks

Harm reduction (NICE, ACC)

- people find e-cigarettes helpful to quit smoking cigarettes

- people using e-cigarettes should stop smoking tobacco completely, because any smoking is harmful

- the evidence suggests that e-cigarettes are substantially less harmful to health than smoking but **are not risk free**

Follow up system

- Active follow-up via telephone, text message or other means

Summary

- We need to make better use of existing guidelines
- We could use disign thinking to shape better, tailored interventions
- We must be aware of new tobacco products coming to the market
- We need to put smoking cessation services higher on the health system agenda