Organizational Health Literacy: the concept, the progress and examples from the field

Allianz Gesundheits Kompetenz
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IUHPE –Global Working Group Health Literacy

Presentation Outline

- Health literacy – working definitions
- Organizational health literacy – the rationale and the concept
- Digital Health literacy – definition and measures and why is it important?
- Practical examples from the field
- Innovative opportunities for change
- Conclusions
- The call for future research

Health literacy - definitions

Health literacy refers, broadly, to the ability of individuals to "gain access to, understand and use information in ways which promote and maintain good health".

WHO, 1998

Health literacy - definitions

The HLS-EU comprehensive, integrated definition of the evolving concept of health literacy

"Health literacy is linked to literacy and it entails people's knowledge, motivation and competencies:

- to access, understand, appraise and apply information
- to take decisions in everyday life
- in terms of healthcare, disease prevention and health promotion
- to maintain and improve quality of life during the life course."

Sørensen, Kristine, et al. 2012. "Health literacy and public health: A systematic review and integration of definitions and models." BMC Public Health, 12:80. doi: 10.1186/1471-2458-12-80

Health Literacy Typology

- *Functional* - Communication of Information
- *Interactive* - Personal Skills
- *Critical* - Community Empowerment

Nutbeam, Health Promotion International 2000

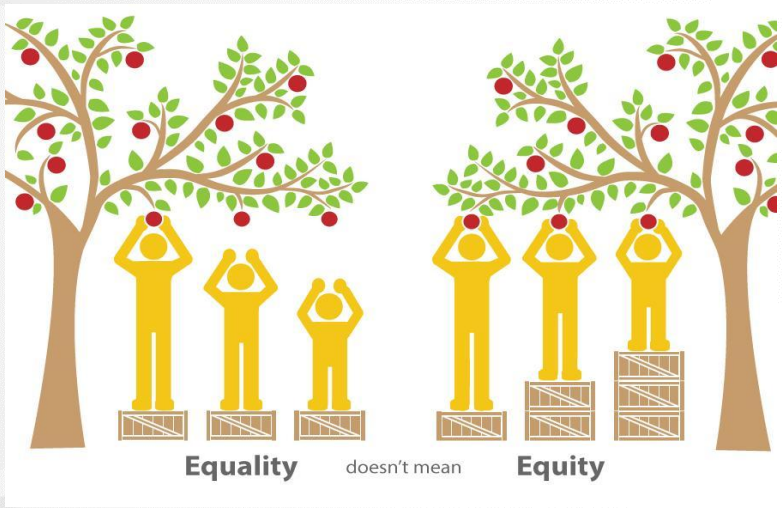
Background

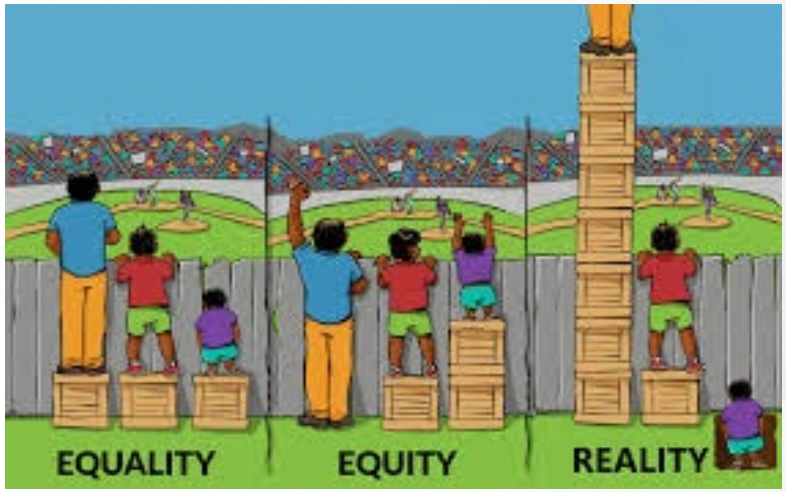
- **The evidence base for health literacy**: low health literacy is significantly associated with poorer health status, less adherence to medical recommendations, less use of preventive services, and early mortality.

- Most of the research has focused on **functional health literacy**, and has been conducted among **special populations.**

- **National data**, based on measuring health literacy according to the broad sense of the concept, is essential for health promotion planning, particularly when **developing health literate organizations**.

Low health literacy is recognized as a strong contributor to health inequalities





Background (cont'd)

….. growing calls to ensure that health literacy not be framed as the sole responsibility of individuals, but that **equal attention be given to ensure that governments and health systems** present clear, accurate, appropriate and accessible information for diverse audiences.

Rudd, Rima E. 2015. "The evolving concept of Health literacy: New directions for health literacy studies." Journal of Communication in Healthcare, 8 (1): 7–9.

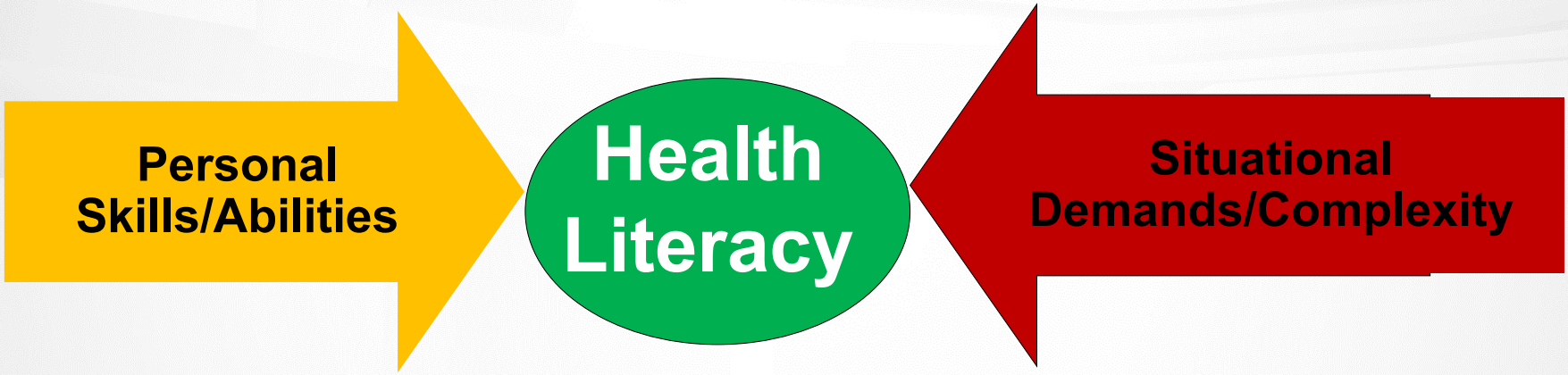
"So a careful balance is needed: health literacy initiatives should strengthen agency, but they should **not shift the responsibility for structural changes to the individual."**

Razum Weishaar Schaeffer Int. Journal of Public Health. 2016

Health literacy responsiveness

Describes the way in which services, organizations and systems make health information and resources available and accessible to people according to health literacy strengths and limitations

Brach C, Keller D, Hernandez LM, Baur C, Dreyer B, Schyve P, Lemerise AJ, et al. Ten attributes of health literate health care organizations. Washington, DC: Institute of Medicine of the National Academies; 2012 Jun.



Personal HL competencies

Organizational/Situational HL demands and support

(Parker, 2009)

Health Literacy as a Vehicle for Empowerment – How ?

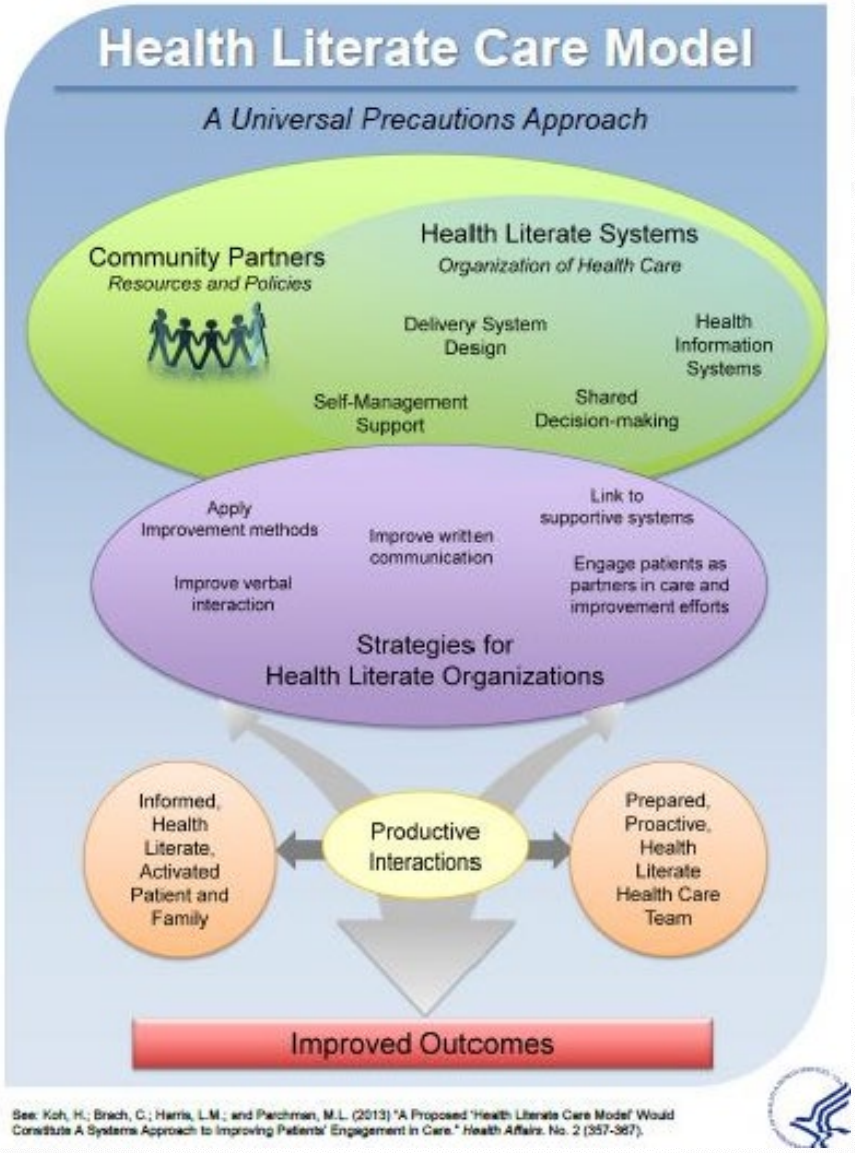
2 Strategic options for Intervention:

Improving levels of health literacy

and/or

Adapting action/ intervention to health literacy needs

Universal Precautions or Personalization?



See: Koh, H.; Brach, C.; Harris, L.M.; and Parchman, M.L. (2013) "A Proposed 'Health Literate Care Model' Would Constitute A Systems Approach to Improving Patients' Engagement in Care." Health Affairs. No. 2 (357-367).

Our Mission…

This graphic reflects the views of the authors of the Discussion Paper "Ten Attributes of Health Literate Health Care Organizations" and not necessarily of the authors' organizations or of the IOM. The paper has not been subjected to the review procedures of the IOM and is not a report of the IOM or of the National Research Council.

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Advising the nation · Improving health

Attributes of a Health Literate Organization

- Ensures easy access to health information
- Prepares workforce
- Targets high risk situations
- Promotes Leadership
- Communicates effectively
- Designs easy to use materials
- Meets needs of all – avoiding stigmatization
- Explains coverage and costs
- Includes consumers
- ***Plans, evaluates and improves***

Suggested citation: International Working Group Health Promoting Hospitals and Health Literate Health Care Organizations (Working Group HPH & HLO) (2019): International Self-Assessment Tool Organizational Health Literacy (Responsiveness) for Hospitals - SAT-OHL-Hos-v1.0-EN-international. Vienna: WHO Collaborating Centre for Health Promotion in Hospitals and Health Care (CC-HPH).

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Editorial committee: Jürgen M. Pelikan, Peter Nowak, Eva Leuprecht, Christoph Schmotzer

Project leader: Jürgen M. Pelikan

This document has been developed in accordance and in cooperation with the WHO Collaborating Centre for Health Promotion in Hospitals and Health Care in Vienna.

Members of the working group HPH & HLO contributing to developing this instrument: Pietro del Giudice (Italy), Gilles Henrard (Belgium), Eva Leuprecht (Austria), Diane Levin-Zamir (Israel), Peter Nowak (Austria), Jürgen M. Pelikan (Austria), Christoph Schmotzer (Austria), Ragnhild Storstein Spilker (Norway), Dominique Vogt (Switzerland), Ying-Wei Wang (Taiwan).

Standards 1-4 with Sub-Standards

Standard 1: Implement organizational health literacy best-practices across all structures and processes of the organization.	Sub-Standard 1.1 The leadership / management of the organization is committed to monitoring and improving organizational health literacy. Sub-Standard 1.2 The organization makes organizational health literacy an organizational priority and secures adequate infrastructures and resources for implementing it. Sub-Standard 1.3 The organization ensures the quality of organizational health literacy interventions by quality management.
Standard 2: Develop documents, materials and services with stakeholders in a participatory manner.	Sub-Standard 2.1 The organization involves patients in the development and evaluation of patient-oriented documents, materials and services. Sub-Standard 2.2 The organization involves staff in the development and evaluation of staff oriented documents, materials and services.
Standard 3: Enable and train staff for personal and organizational health literacy.	Sub-Standard 3.1 Personal and organizational health literacy is understood as an essential professional competence for all staff working in the organization.
Standard 4: Provide and support easy navigation and access to documents materials and services.	Sub-Standard 4.1 The organization enables first contact via user friendly website and phone. Sub-Standard 4.2 The organization provides information necessary for patients and visitors for getting to the hospital. Sub-Standard 4.3 Support is available to help patients and visitors to navigate the hospital. Sub-Standard 4.4 Health information for patients and visitors is available for free.

Standards 5-8 with Sub-Standards

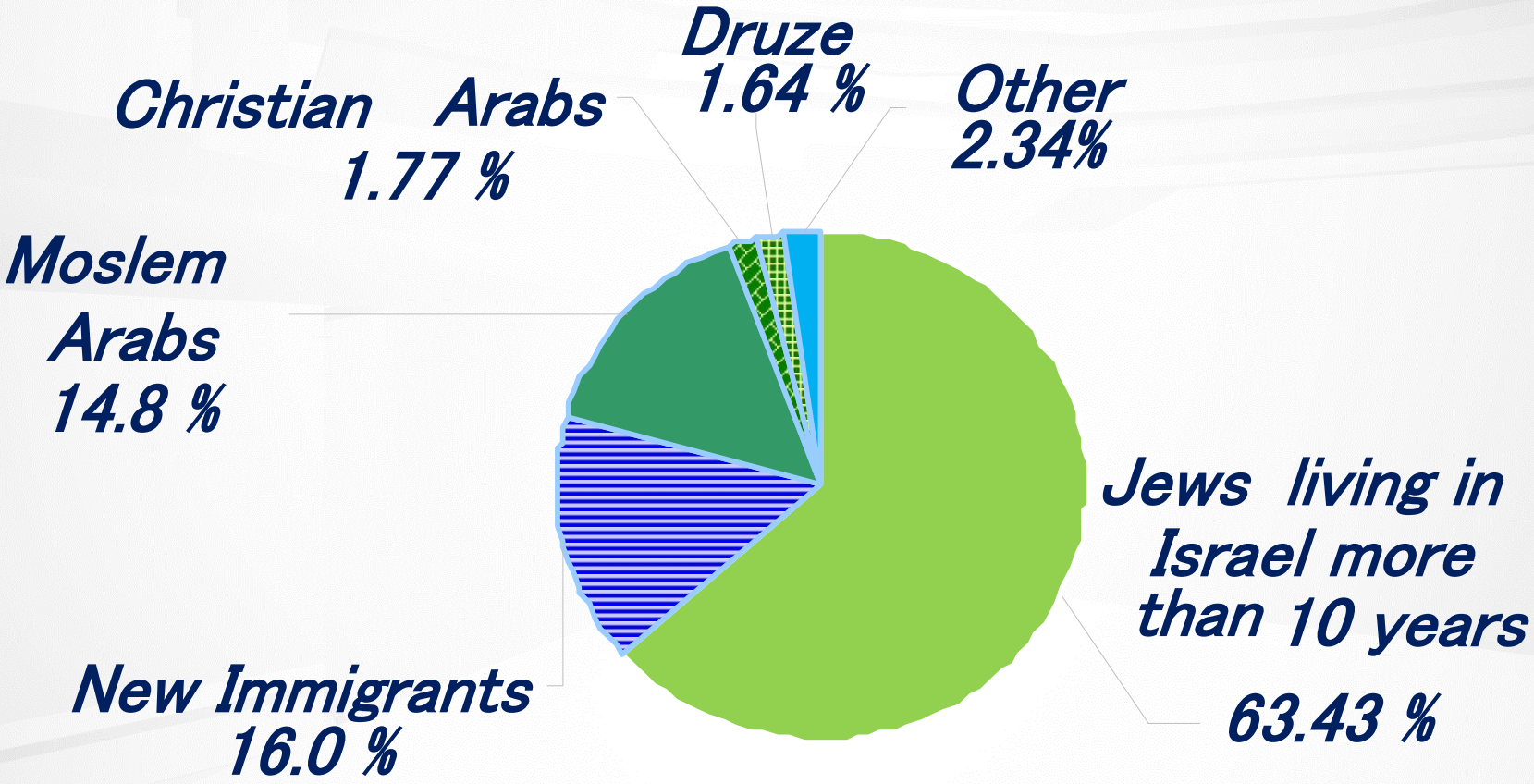
Standard 5: **Apply health literacy best-practices in all forms of communication with patients.**	**Sub-Standard 5.1** Spoken communication with patients is of high quality and easy-to-understand. **Sub-Standard 5.2** Written materials are of high quality, easily accessible, and easy-to-understand. **Sub-Standard 5.3** Digital services and new media are of high quality, easily accessible, and easy-to-use. **Sub-Standard 5.4** Information and communication is offered in the languages of relevant patient groups by specific, trained personnel and for all provided materials. **Sub-Standard 5.5** Communication which is easy-to-understand and to act on, especially in high-risk situations, is accepted as a necessary safety measure.
Standard 6: **Promote personal health literacy of patients and relatives beyond discharge.**	**Sub-Standard 6.1** The organization supports patients in improving health literacy with regard to disease-specific self-management. **Sub-Standard 6.2** The organization supports patients in improving health literacy with regard to development of more healthy lifestyles. **Sub-Standard 6.3** Upon discharge, patients are well informed about their future treatment and recuperation process.
Standard 7: **Promote personal health literacy of staff with regard to occupational risks and personal lifestyles.**	**Sub-Standard 7.1** The organization supports staff in improving their health literacy for self-management of occupational health and safety risks and of healthy life-styles.
Standard 8: **Contribute to promoting personal and organizational health literacy in the region.**	**Sub-Standard 8.1** The organization contributes to the improvement of personal health literacy of the local population. **Sub-Standard 8.2** The organization supports the dissemination and further development of organizational health literacy in the region and beyond.

Clalit Health Services

- 4.5 million members; 54% of Israel's population
- Over 45,000 workers
- 1,450 primary and specialized care community clinics
- 14 major teaching hospitals: 8 general, 2 psychiatric, 1 pediatric, 2 geriatric, 1 rehabilitation
- 416 pharmacies
- 40 diagnostic imaging centers
- 67 laboratory centers
- 83 physiotherapy units
- 30 occupational therapy units
- 87 diet & nutrition consultation units
- 22 mental health clinics, 70 dental clinics
- 20 alternative medicine clinics

2nd largest non-government health care organization in the world

Israel - A Country of Cultures



O-HL: 360º A systems approach

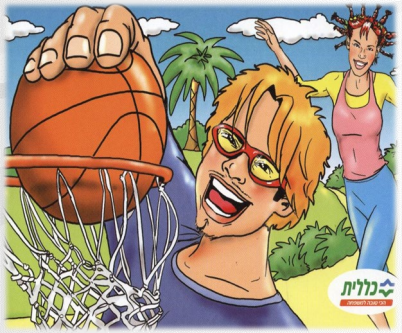
Capacity building

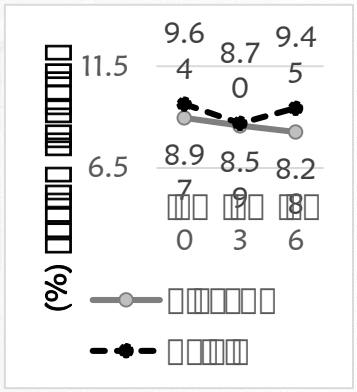
Digital HL and Innovation

Health Literacy

Community Participation

Evaluation Monitoring Research





Directions!

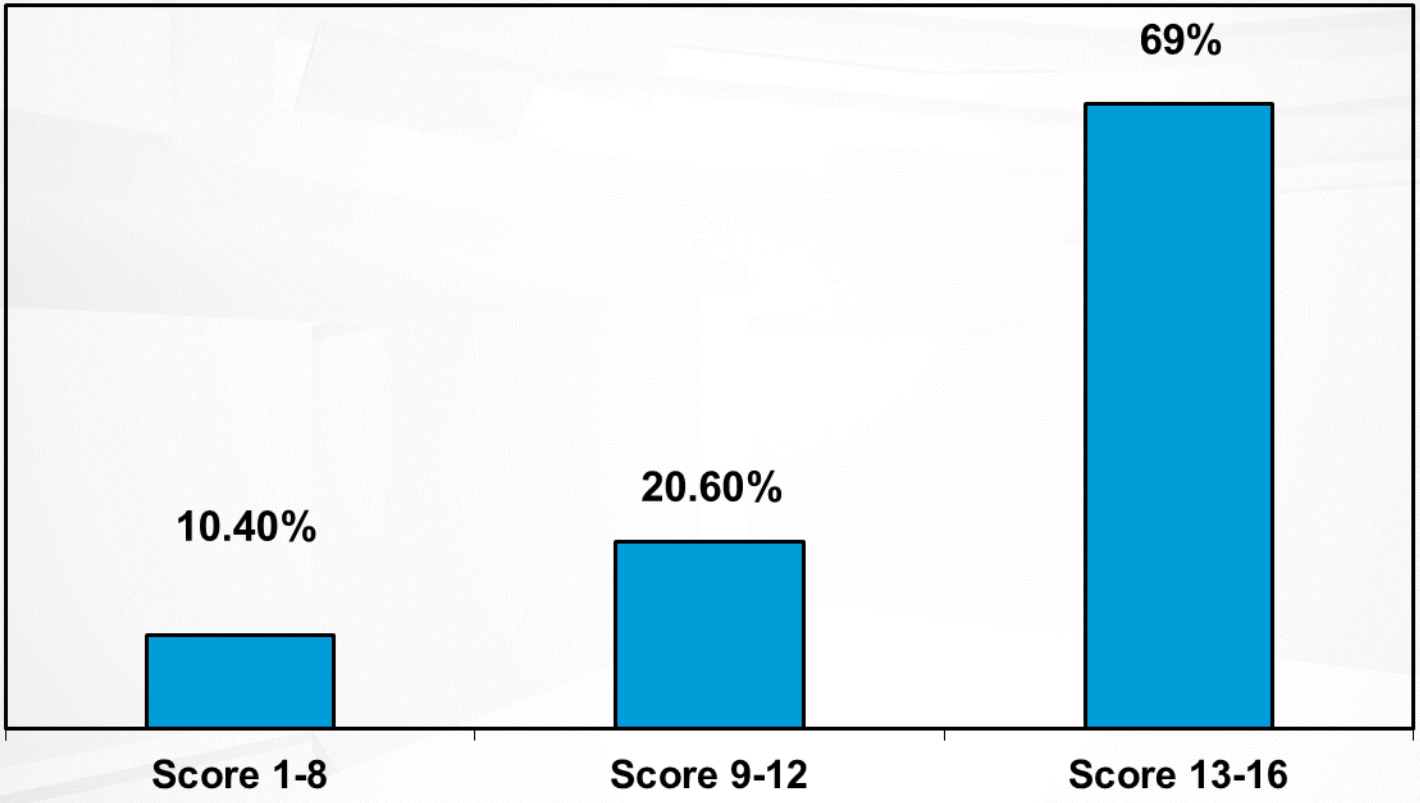
Therefore, we need to know where we stand regarding the public we serve:

- Organizational Surveys
- National Surveys

The Israel Health Literacy Study

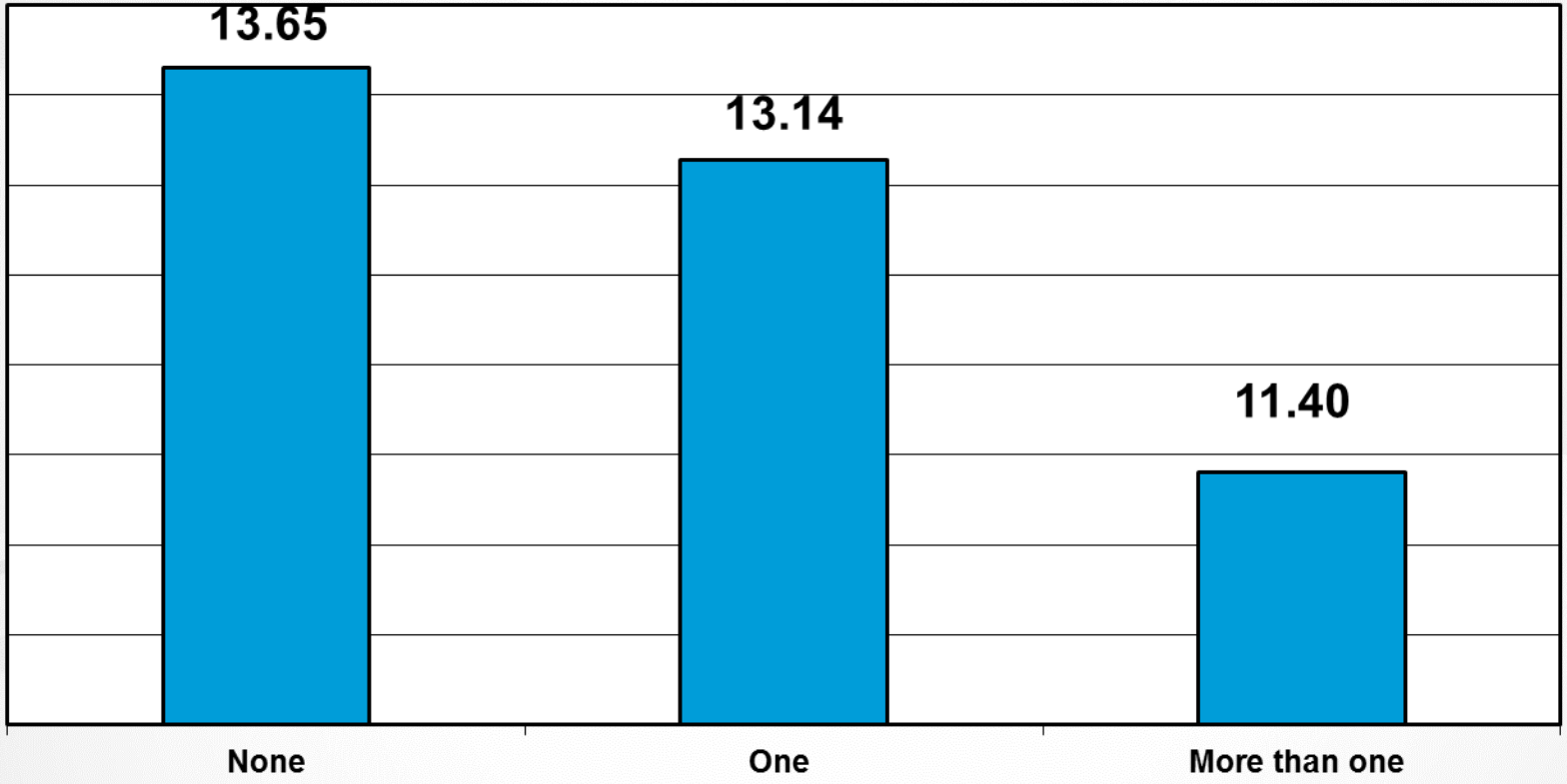
- **National survey:** close collaboration with HLS-Eu
- **Objective**: To assess the level of health literacy in the Israeli population and to study the association between health literacy, social determinants, and association with measure of healthcare service use, health behavior, and reported health.
- **Methodology**: Face-to-face home interviews among a representative sample of 600
- **Four languages**: Hebrew, Arabic, Russian & Amaharic
- **Instrument validated** via focus groups with key informants

Distribution of HLS-ISR scores



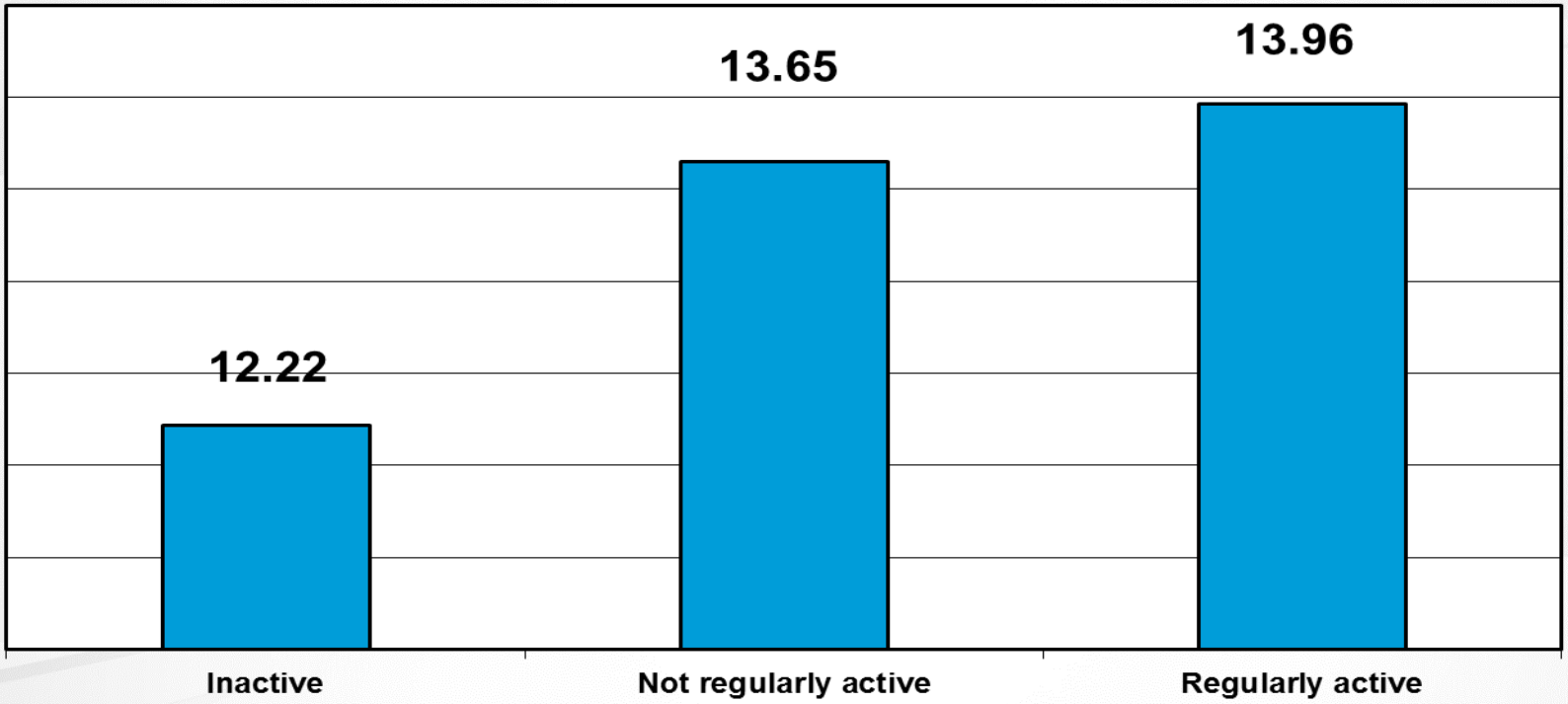
$$\bar{x} = 13.1 \pm 3.26\ SD$$

HLS-ISR by prevalence of chronic conditions:
low scores = more chronic diseases



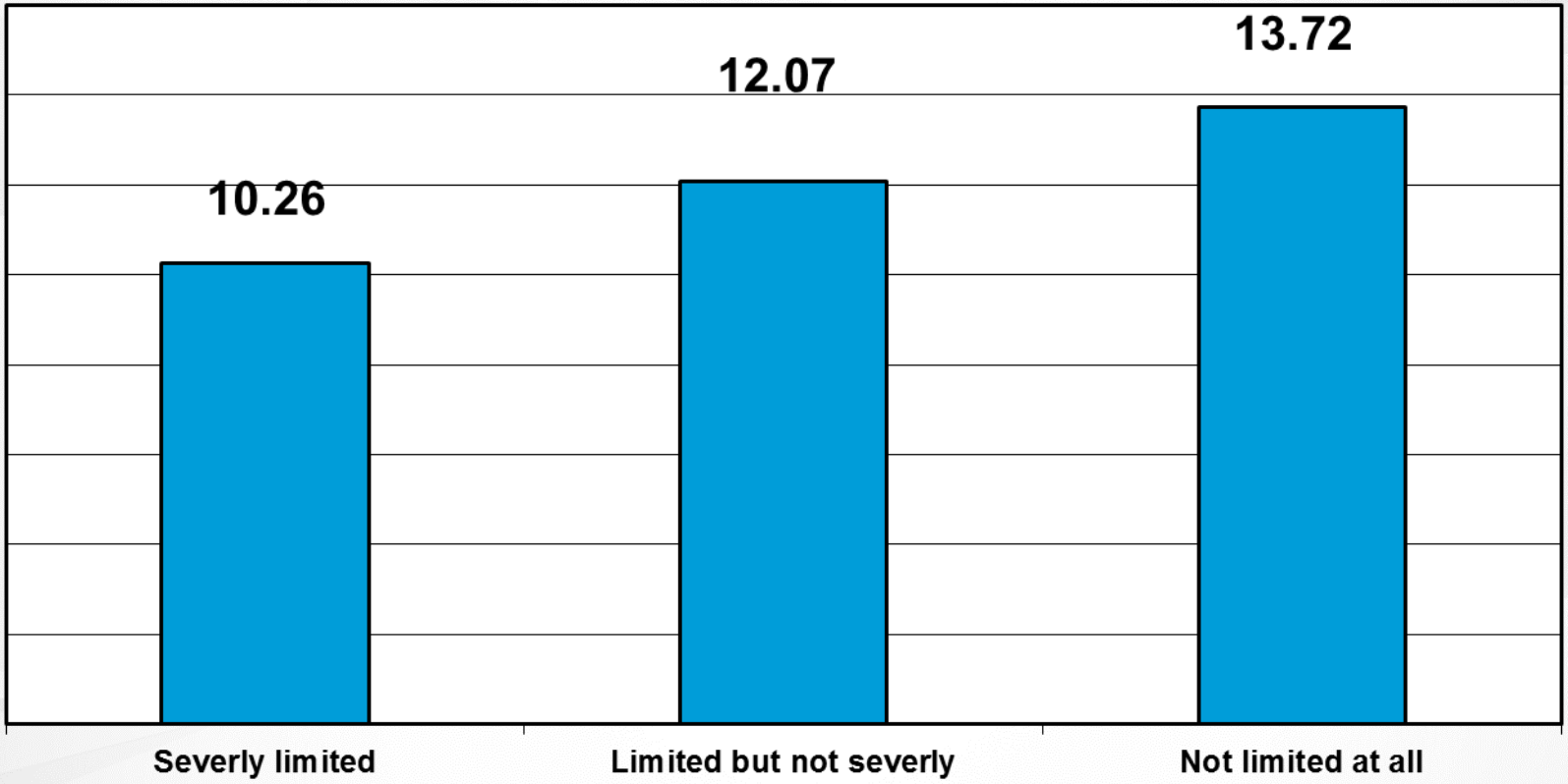
P< 0.0001

HLS-ISR by frequency of physical activity



$P < 0.0001$

HLS-ISR and limitations due to health problems



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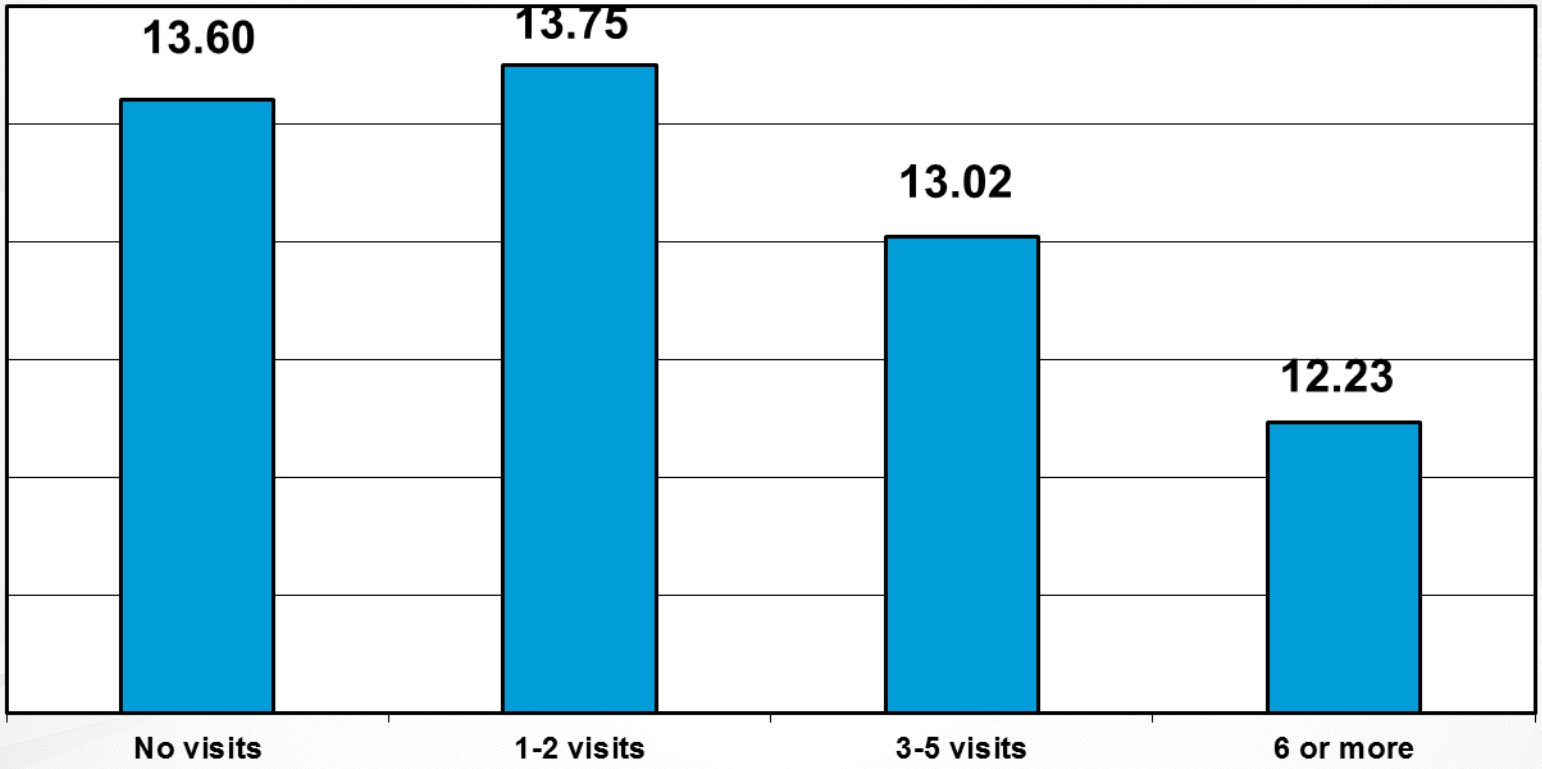
HLS-ISR by frequency of doctor visits (in the last 12 months)



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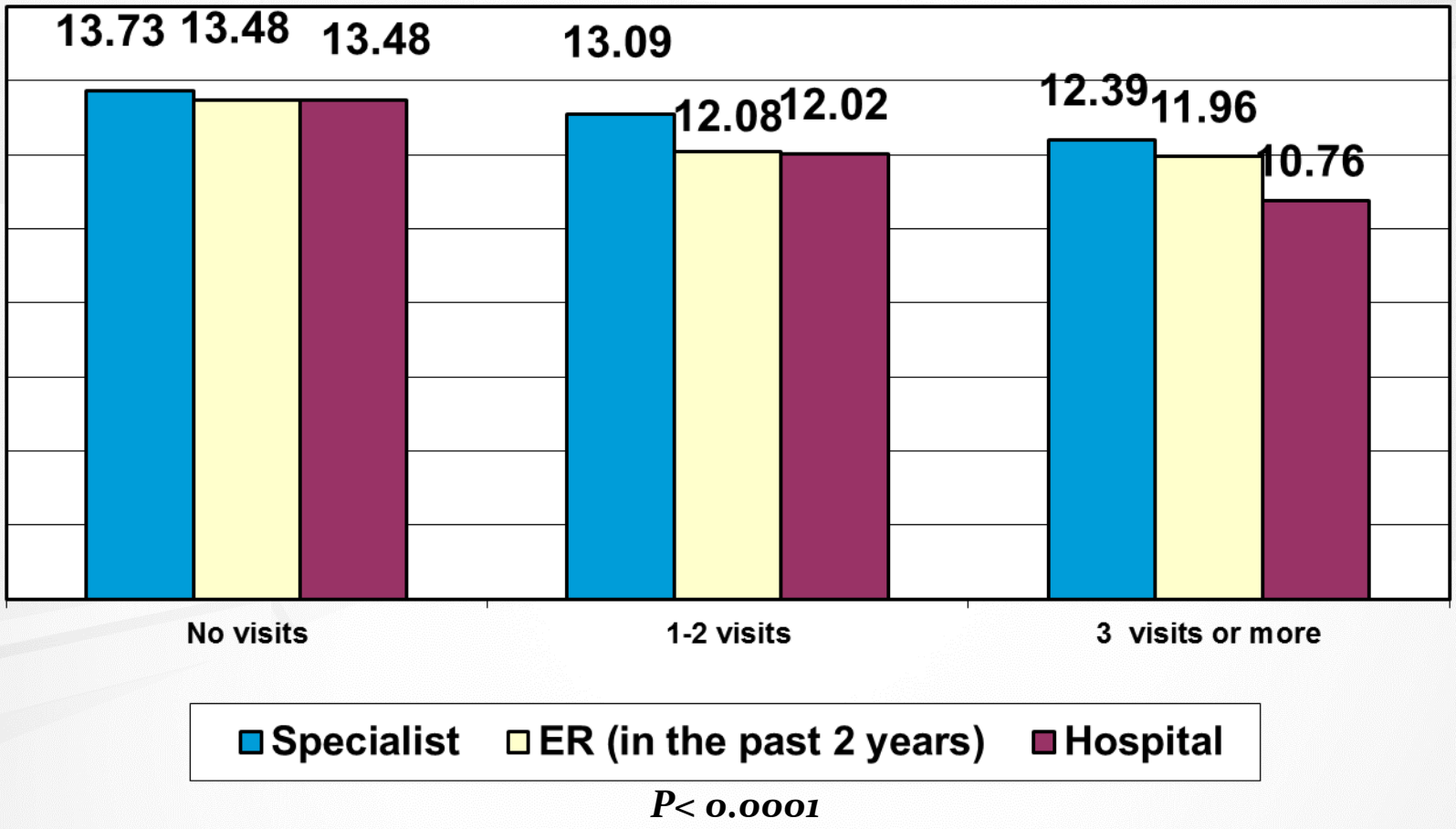
HLS-ISR by frequency of health service use



P< 0.0001

HLS-ISR and multivariate analysis of personal + social determinants

Dependent Variable - HLS	95% C.I.		HLS-ISR	
Independent Variable	Lower	Upper	(Exp)B	P value
Gender	0.701	1.593	1.056	0.794
Age	0.974	1.001	0.987	0.070
Sector	0.510	1.377	0.838	0.486
Religiosity	0.524	1.309	0.838	0.420
Marital status	0.555	1.378	0.874	0.563
Education – 12 years	1.110	3.126	1.863	0.019
Education > 12 years	1.173	3.453	2.013	0.011
Average income	0.639	1.681	1.036	0.885
Above average income	1.604	4.328	2.153	0.033
Employment status	0.799	2.097	1.294	0.294

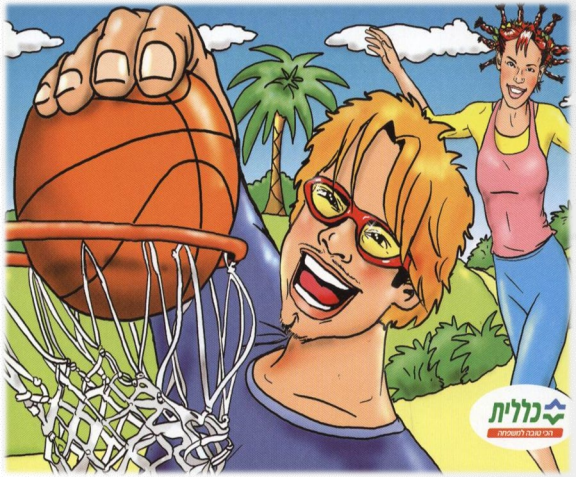
National Strategy for Health Literacy and Chronic Illness - Overview

- Patient Ed Kits & Internet
- In-service Training for Primary Care Teams
- Lifestyle and Self-Management Workshops
- Tailored Programs for Special Populations

Goldfracht M, Levin D, Peled O, Poraz I, Stern E, Brami JC, Matz E, Fruman A, Weiss D, Lieberman N. Dreiher J. (2011) Twelve-year follow-up of a population-based primary care diabetes program in Israel. International Journal of Quality in Healthcare. August 2011.

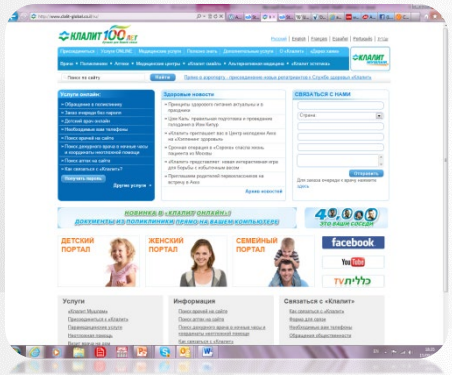
Health Literate Organizations - Designs easy to use materials

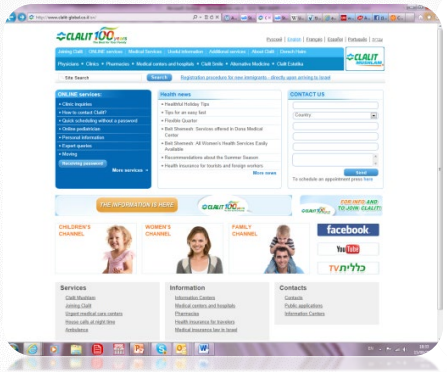
Support Through Easy–to–Use Materials



Health Literate Organization - Ensures easy access to health information

On-Line in Hebrew, Arabic, Russian, French, Portuguese





On-line health information

People with Chronic Conditions - Diabetes

- **Text message (SMS)** intervention based on Stages of Change for people with diabetes
- **Social finance model** for testing lifestyle change in pre-diabetes in community settings
- **Digital information** prescriptions (tailored e-mails) including videos, sent directly from the healthcare team
- **CHANGE-D** – Coaching for Health and New Goals for Empowerment in Diabetes

Adherence to treatment recommendations in Type 2 Diabetes, using motivational Short-Message-Service (SMS)

Prof. Diane Levin-Zamir, PhD, MPH, MCHES & Daniella Piran, RD, MPH
National Director, Dept Health Promotion and Education
Clalit Health Services, Israel
Associate Professor, University of Haifa
School of Public Health
IUHPE Global Working Group - Health Literacy

כללית מעל 100 שנה
הכי טובה למשפחה

תמורות
תכנית להגברת היצמדות והתמדה לאורח חיים בריא ולטיפול תרופתי בסוכרת

Aim of the study

To examine the effect of motivational SMS on diabetes control and clinical measures related to the diabetes, as well on self-perceived outcomes.

Methods

- **Study population**: 80 men and women ages 30-70 with uncontrolled diabetes, who use routinely use mobile phone text messages.
- A pool of **150 text messages** were developed by an inter-disciplinary team: based on the Trans Theoretical Model of health behavior applied to on nutrition, physical activity, smoking, foot health, medication taking, examination follow-up

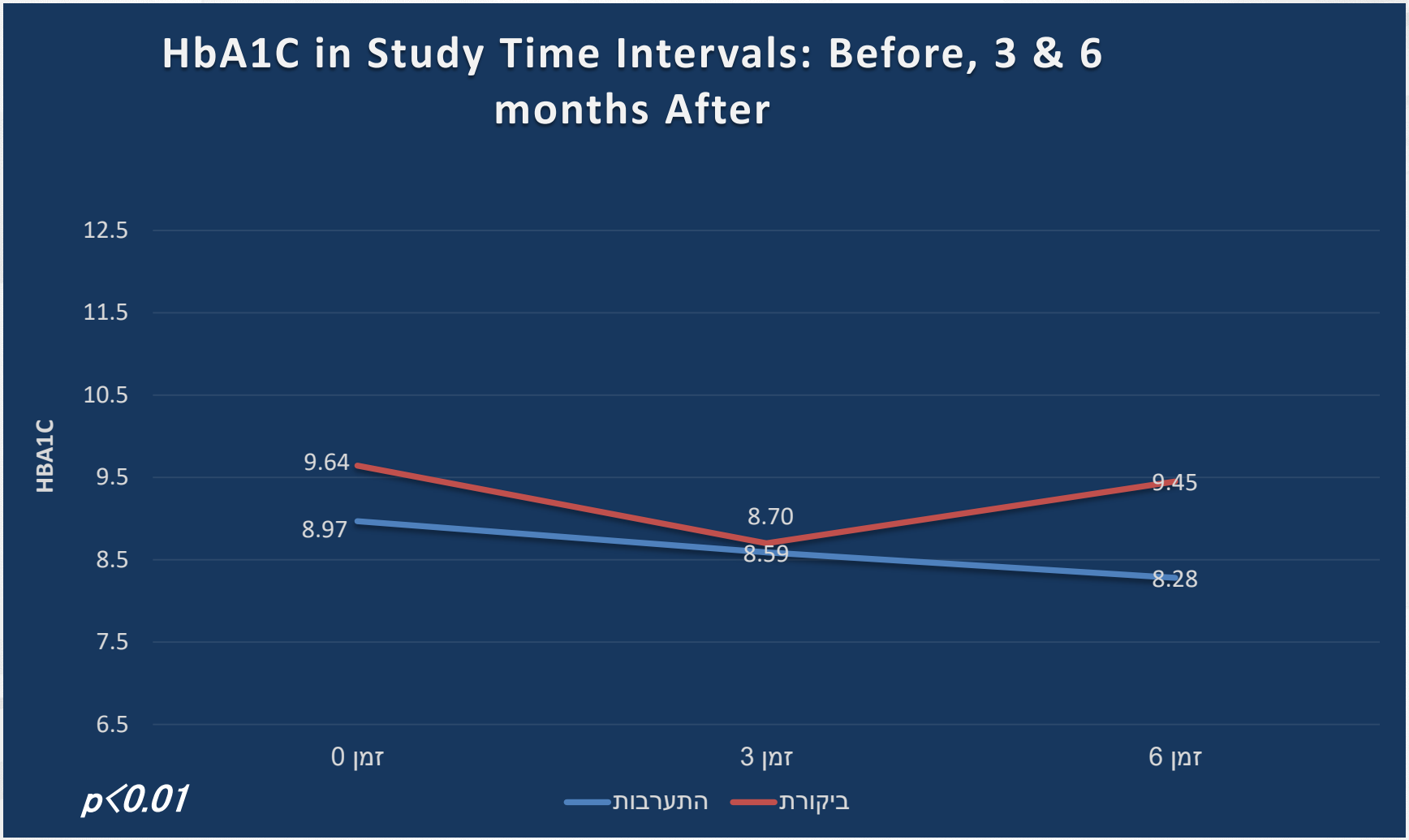
- 50 participants **received a daily SMS**, for 3 months, and an SMS every 2nd day in the next 3 months.
- Routine clinic visits continued in study period

Study Measures

- Data collection was conducted at 3 time points: before intervention, 3 & 6 months after;
- **Baseline measures:** health literacy,
- **Clinical measures:** HbA1c, LDL, BMI, blood pressure
- **Self-reported measures:** QoL, self-efficacy, patient-perceived difficulties in diabetes treatment, medications adherence
- Statistical analysis was performed using a step-wise regression model.

Ishikawa H, Takeuchi T, Yano E. Measuring functional, communicative, and critical health literacy among diabetic patients. Diabetes Care. 2008;31(5):874-879.

Results – Text message (SMS)



E-health

“eHealth as Healthcare practice supported by electronic processes and communication” (2001)

”eHealth as a set of technological themes in health today, more specifically based on commerce, activities, stakeholders, outcomes, locations, or perspectives” (2005)

Della Mea, Vincenzo (2001). "What is e-Health (2): The death of telemedicine?". *Journal of Medical Internet Research*. **3** (2): e22. doi:10.2196/jmir.3.2.e22. PMC 1761900. PMID 11720964. Retrieved 2012-04-15.

*Oh, Hans; Rizo, Carlos; Enkin, Murray; Jadad, Alejandro; Powell, John; Pagliari, Claudia (24 February 2005). "What Is eHealth (3): A Systematic Review of Published Definitions". Journal of Medical Internet Research. **7** (1): e1.doi:10.2196/jmir.7.1.e1. PMC 1550636. PMID 15829471*

Forms of eHealth

- **Electronic health record**: enabling the communication of patient data between different healthcare professionals (GPs, specialists *etc.*);
- **Computerized physician order entry** : a means of requesting diagnostic tests and treatments electronically and receiving the results
- **ePrescribing**: access to prescribing options, printing prescriptions to patients and sometimes electronic transmission of prescriptions from doctors to pharmacists
- **Clinical decision support system**: providing information electronically about protocols and standards for healthcare professionals to use in diagnosing and treating patients
- **Telemedicine**: physical and psychological diagnosis and treatments at a distance, including telemonitoring of patients functions;
- **Consumer health informatics**: use of electronic resources on medical topics by healthy individuals or patients;
- **Health knowledge management**: *e.g.* in an overview of latest medical journals, best practice guidelines or epidemiological tracking (examples include physician resources such as Medscape and MDLinx);

Forms of eHealth

- **Virtual healthcare teams**: consisting of healthcare professionals who collaborate and share information on patients through digital equipment (for transmural care);
- **Medical research using grids**: powerful computing and data management capabilities to handle large amounts of heterogeneous data.
- **Health infomatics/Healthcare information systems**: also often refer to software solutions for appointment scheduling, patient data management, work schedule management and other administrative tasks surrounding health

mHealth

New horizons for health through mobile technologies

Based on the findings of the second global survey on eHealth

Global Observatory for eHealth series - Volume 3

World Health Organization

Self-monitoring through sensors

The use of sensors or tools which are readily available to the general public to track and record personal data.

First developed for the healthcare system to promote telemedicine but evolved to promoting self-monitoring for populations

eHealth ecosystem

Source: http://hitconsultant.net

Social media and health

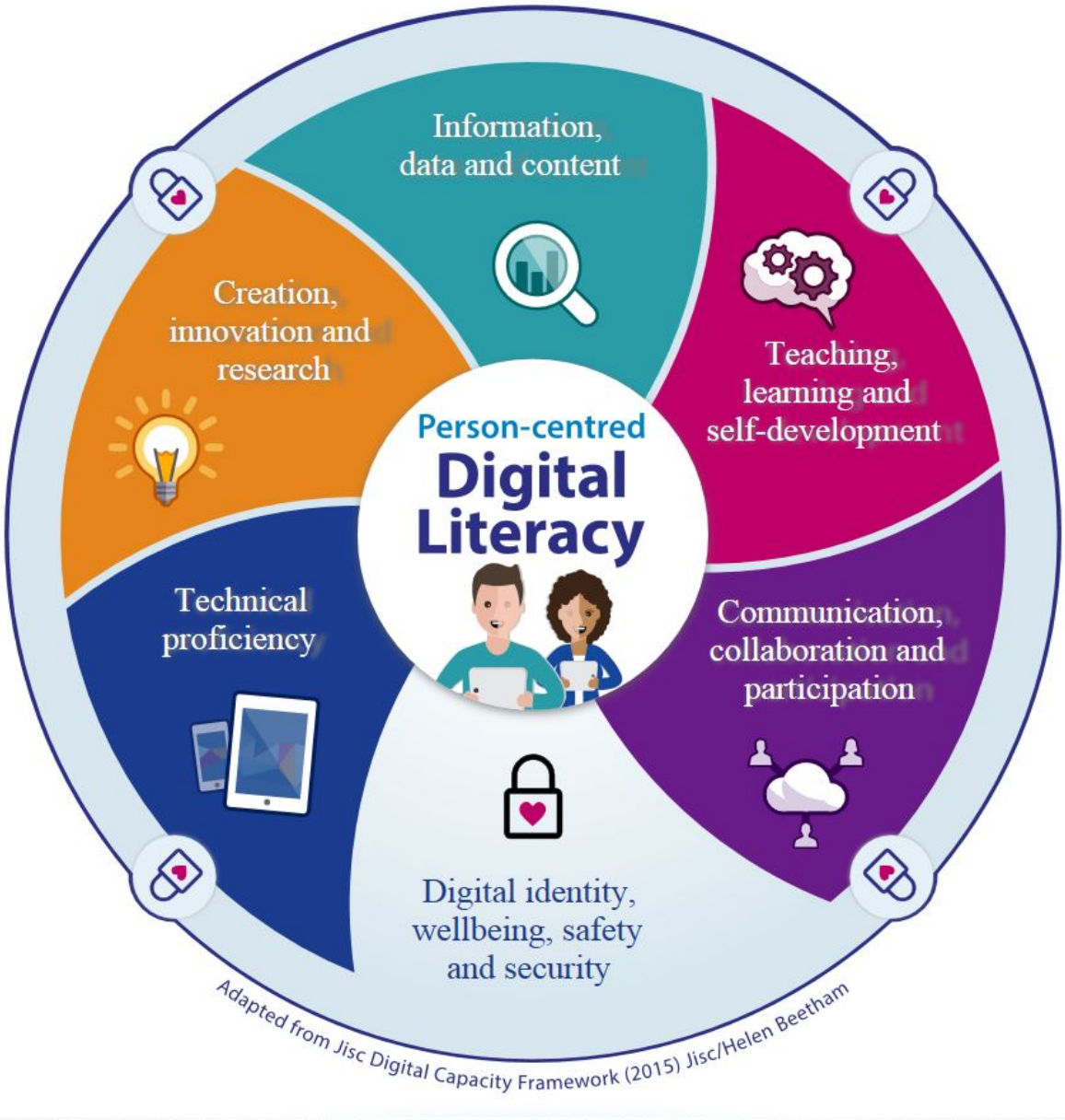
Advantages

- Overcomes distances
- Overcome language barriers
- Conveys real-time information
- Overcomes patient-provider barriers
- Can expedite the navigation of health services
- Can be cost-effective

Barriers to eHealth

- Privacy and confidentiality
- Credibility
- Usability
- Accessibility
- Common language

KPMG
Digital health: heaven or hell?
How technology can drive or derail the quest for efficient, high quality healthcare


Information, data and content
Teaching, learning and self-development
Communication, collaboration and participation
Digital identity, wellbeing, safety and security
Technical proficiency
Creation, innovation and research
Person-centred
Digital Literacy
Adapted from Jisc Digital Capacity Framework (2015) Jisc/Helen Beetham

eHealth literacy definition

“the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem.”

Skinner and Norman - J Med Internet Res. 2006 Apr-Jun; 8(2): e9. Published online 2006 Jun 16.

Digital Divide or Digital Development?

Health literacy and aging

The sub-age groups among the elderly

- 55 – 70 are considered the “baby boomers”, born after World War II;
- those 70+ have been called the “silent generation”, born between 1925-1945.
- Research indicates that baby boomers are significantly more likely than older adults to use the internet for seeking health information, send e-mails, adopt to automated call centers, text, and utilize telehealth resources in order to receive healthcare (LeRouge et al. 2014).

Health literacy and culture change

Migration/Immigration/Natural change from traditional to Western cultures

Levin-Zamir, D., Leung, A. Y. M., Dodson, S., & Rowlands, G. (2017). Health literacy in selected populations: Individuals, families, and communities from the international and cultural perspective. Information Services & Use, 37(2), 131–151

Children/Adolescents as a Social Minority

Health literacy and chronic health conditions

Heijmans, M., Waverijn, G., Rademakers, J., Vaart, R. van der, Rijken, M. Functional, communicative and critical health literacy of chronic disease patients and their importance for self-management. Patient Education and Counseling: 2015, 98(1), 41-48

ehealth literacy measurement

Instrument includes 10 questions (self report):

- Ability to find, use and evaluate on-line ehealth information.
- Level of confidence for using information from the internet

Media Health Literacy

Levin-Zamir D, Lemish D, Gofin R. Health Education Research 2011

Digital health literacy and the social environment

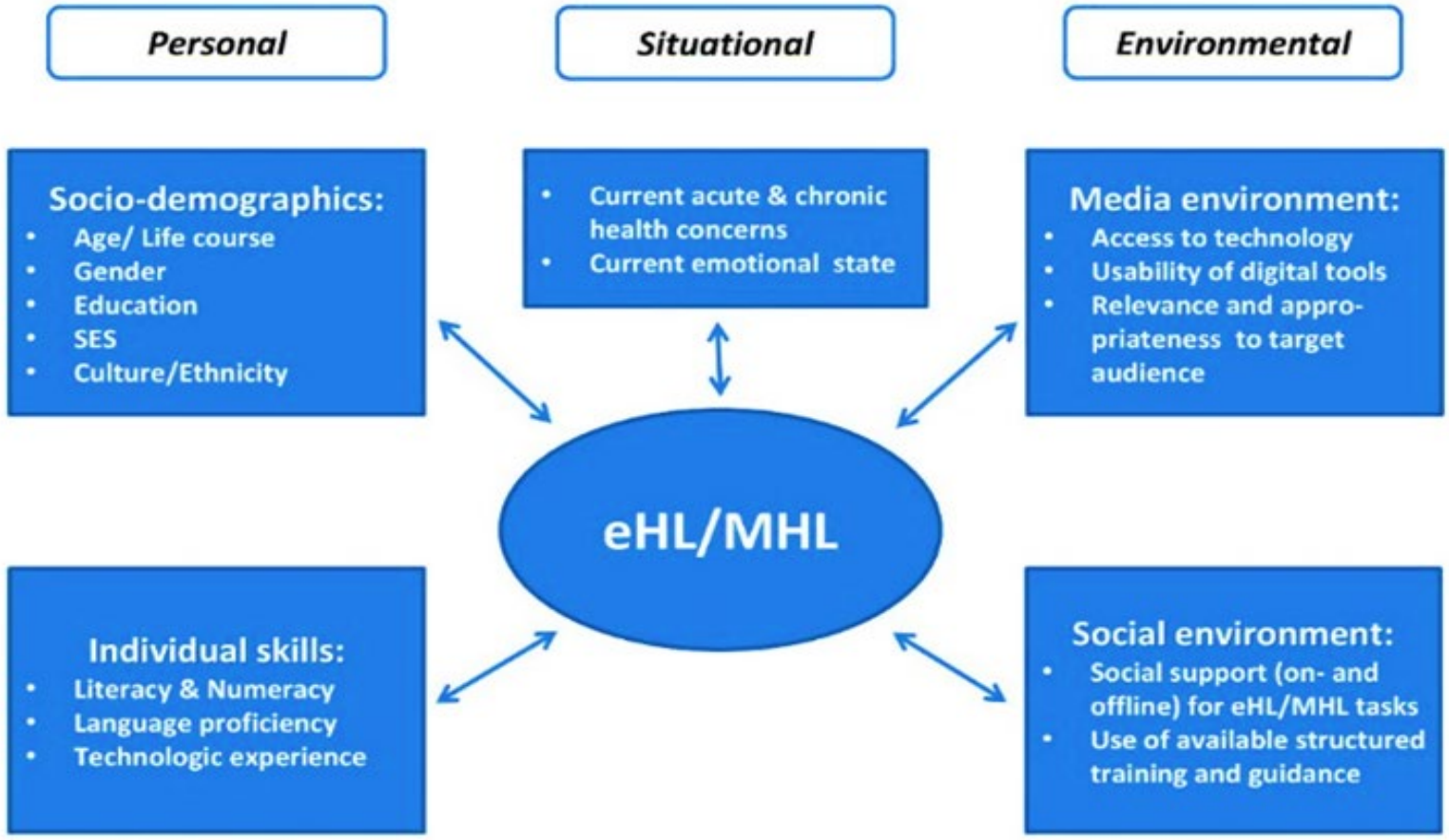


Figure 1. The complexity of eHealth Literacy (eHL) and Media Health Literacy (MHL) in context.

Levin-Zamir, D., Bertschi, I. (2018) Media Health Literacy, eHealth Literacy, and the Role of the Social Environment in Context International Journal for Environmental Research for Public Health 15(8), 1643

Information Therapy

Original Paper

Reduced Hospitalizations, Emergency Room Visits, and Costs Associated with a Web-Based Health Literacy, Aligned-Incentive Intervention: Mixed Methods Study

Jeffrey C Greene[1], BS ; Jolie N Haun[2], EdS, PhD ; Dustin D French[3], PhD ; Susan L Chambers[4], MD ; Robert H Roswell[5], MD

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[5]University of Oklahoma College of Medicine, Health Administration and Policy, University of Oklahoma College of Public Health, Oklahoma City, OK, United States

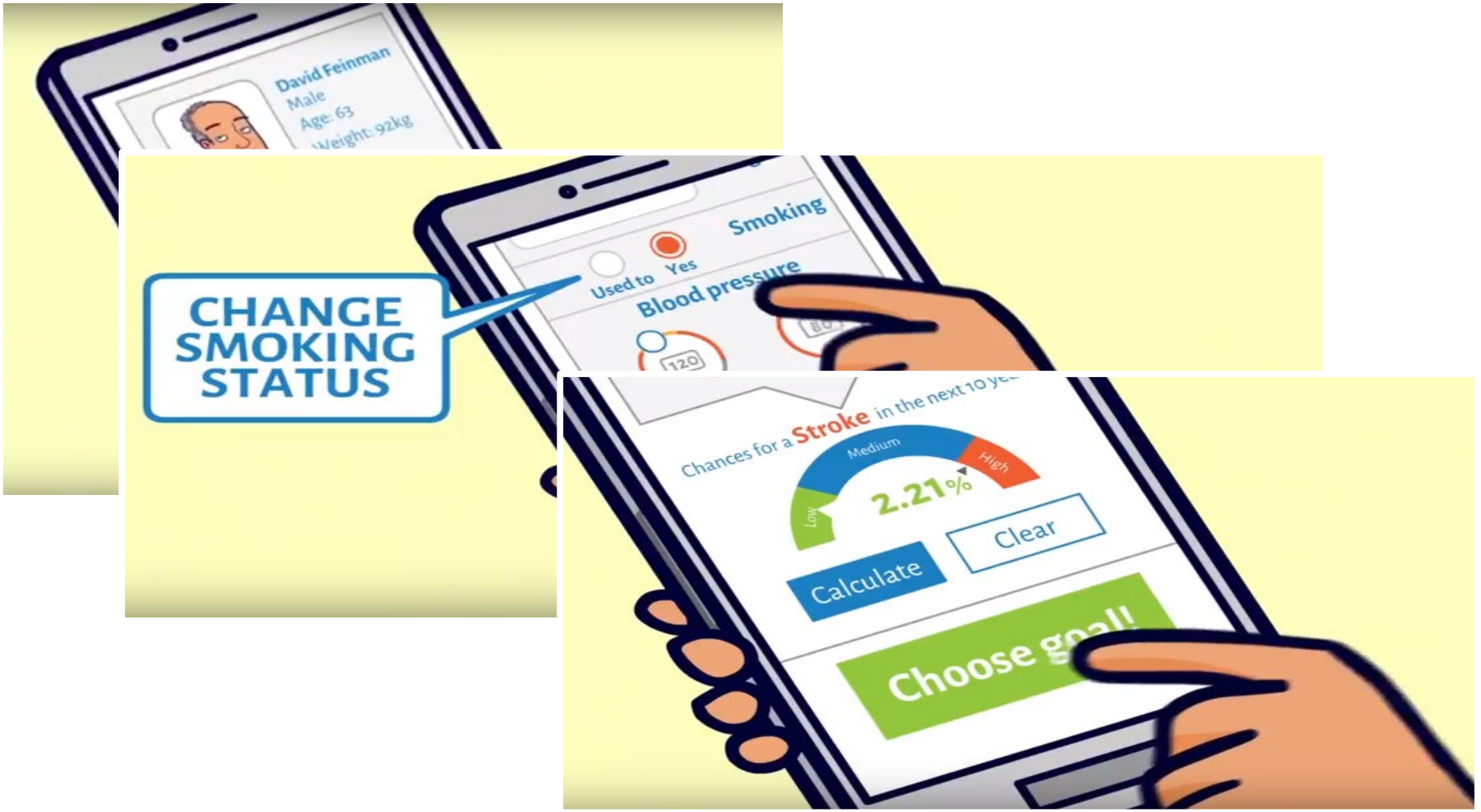
I-deal health

“Giving patients the power to visualize their own success”

The healthcare system challenge – how to encourage patients to make life style changes?

Empowering the patient to choose personal goals

2



Enabling the patient to close the loop with the healthcare system

3

"BYOD Tele-Dermatology" on video: a country-wide reality in Israel

CLALIT 100 over years
The Best For Your Family

September 2016

Clalit Health Services, Israel's leading HMO, is proud today to announce its new country-wide **BYOD Tele-Dermatology Video Service**, our third Tele-Medicine service in 5 years.

Emphasizing Quality of Care, the new service is staffed by board certified dermatologists and supervised and managed by **Clalit's** top clinicians.

Committed to Equality of Care, we are able to provide equitable and accessible professional care in every household in Israel, from the major urban centers to the most remote parts of the country; all from the comfort of one's very own home.

Practicing Continuity of Care, our dermatologists are linked to our patients' central Electronic Medical Record enabling them to see "the complete medical picture" during consultation. Documentation, recommendations and referrals are recorded directly into the patient's EMR and a patient's copy is delivered digitally.

Clalit has operated a **Tele-Pediatrics Service** for the past 5 years and a **Tele-Family-Practice** for the past 13 months – both with great success. At present, we provide more than 16,000 e-consultations a month, more than 50% of all contacts are comprised of video consultations.

Clalit's eHealth wing *is a disruption arm of the Community Medicine Division of* ***Clalit Health Services of Israel***

Innovative Intervention for Immigrants - You tube

- Instructional videos
- Supporting digital health literacy skills for internet
- Videos specifically instructing on how to use smartphones for accessing health information

מה אפשר להכין בבית במקום

? באילו מצרכים ניתן להשתמש

המחשה מותאמת תרבות וסימפטומים

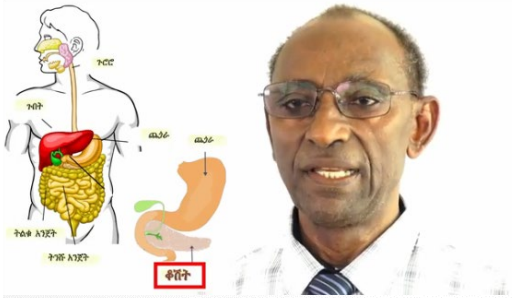
מצגת המתארת את הסימפטומים

מה אפשר להכין בימי הולדת

? באילו מצרכים ניתן להשתמש

הגדרת מחלת הסוכרת וסוגיה

מצגת המתארת את מחלת הסוכרת



“I never thought I could get health information from the Internet!”

Unexpected uses of an Internet website designed to enable Ethiopian immigrants with low/no literacy skills to browse health information

Guttman N, Lev E, Segev E. new media & society. 1–24 2017

Empowering Low income minority youth through Critical Media Health Literacy: "The Bigger Picture"

Schillinger D, Do low-income youth of color see "The Bigger Picture" when discussing Type 2 diabetes? IJERPH, 2018

Innovation and senior adult participation: fall prevention

Defining the problem:

Identifying elders at risk for a second fall

Process:

Focus groups with elders in the community

Developing the solution:

Reluctance to report about a fall

Participatory Innovation

CDI NEGEV
CENTER FOR DIGITAL INNOVATION

A LITTLE BIT ABO

CDI Negev – Centre for Digital I
a first of a kind, non-profit orga
quality of our lives, by creating
having to do with healthy aging
senior citizens.

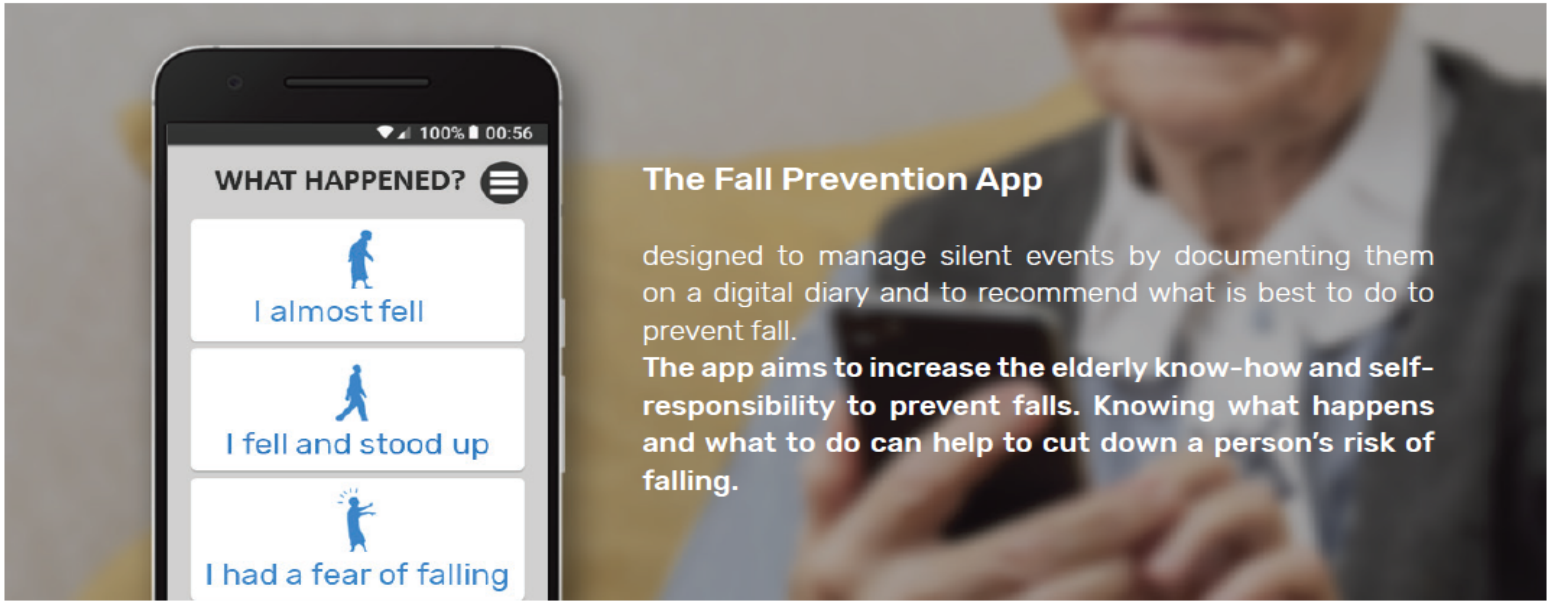
SPIRE, INNOVATE, IMPLEMENT

OUR LIVING LAB

At CDI's Living lab, we enable you to examine your ideas and your solution (product or service) while still in a stage of a prototype, experiment and simulate with it in a fully integrated and practical environment. Thus, allowing you to create revolutionary and holistic custom-made solutions for your needs.

ACCESS TO BREAKTHROUGH STUDIES

As a leading partner of CDI's, the Ben Gurion University serves as a source of knowledge and access to ground

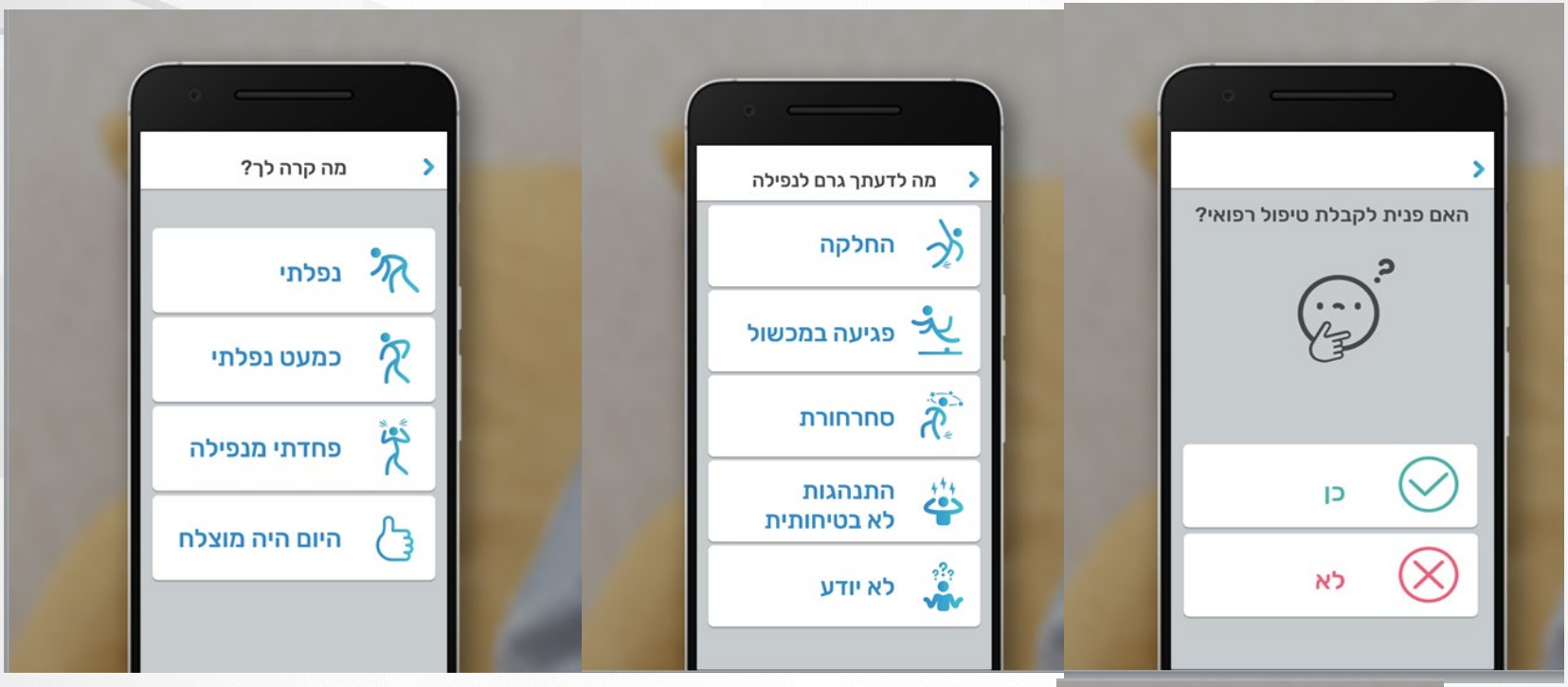


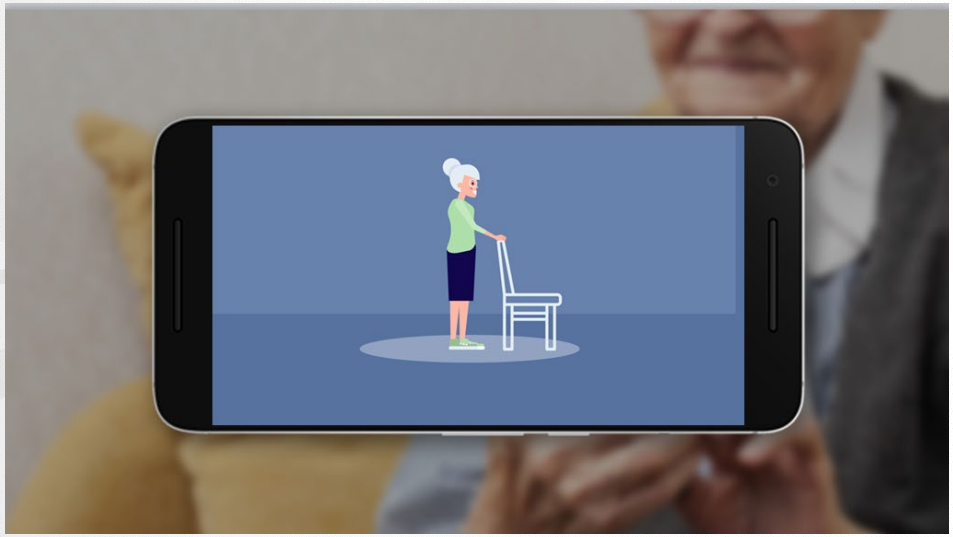
Falls can be prevented. These are the Apps' recommendations:

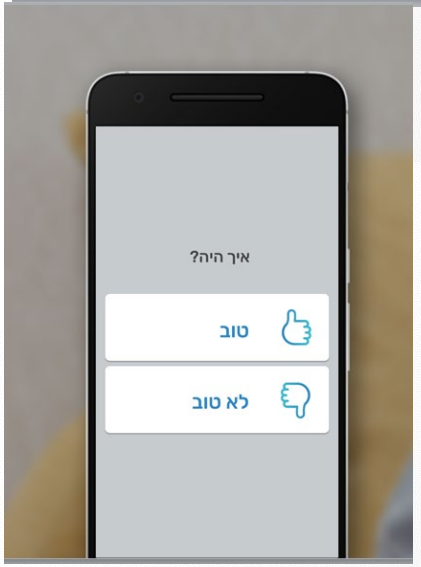
1. Talk to Your Doctor, the digital diary will be a useful tool to discus with the physician about risk evaluation, medicines review, taking vitamin D supplements, or have your eyes checked. The app will suggest the users tests to assess their risk of falling, such as the 4-stage Balance test approved by the CDC and STEADI.

2. Do Strength and Balance Exercises, the app will suggest evidenced-based stability and balance exercises.

3. Make Your Home Safer, the app will suggest a Fall proofing test for the home to make it safer and appropriate.


האם פנית לקבלת טיפול רפואי?
כן
לא
מה לדעתך גרם לנפילה
החלקה
פגיעה במכשול
סחרחורת
התנהגות לא בטיחותית
לא יודע
מה קרה לך?
נפלתי
כמעט נפלתי
פחדתי מנפילה
היום היה מוצלח




איך היה?
טוב
לא טוב

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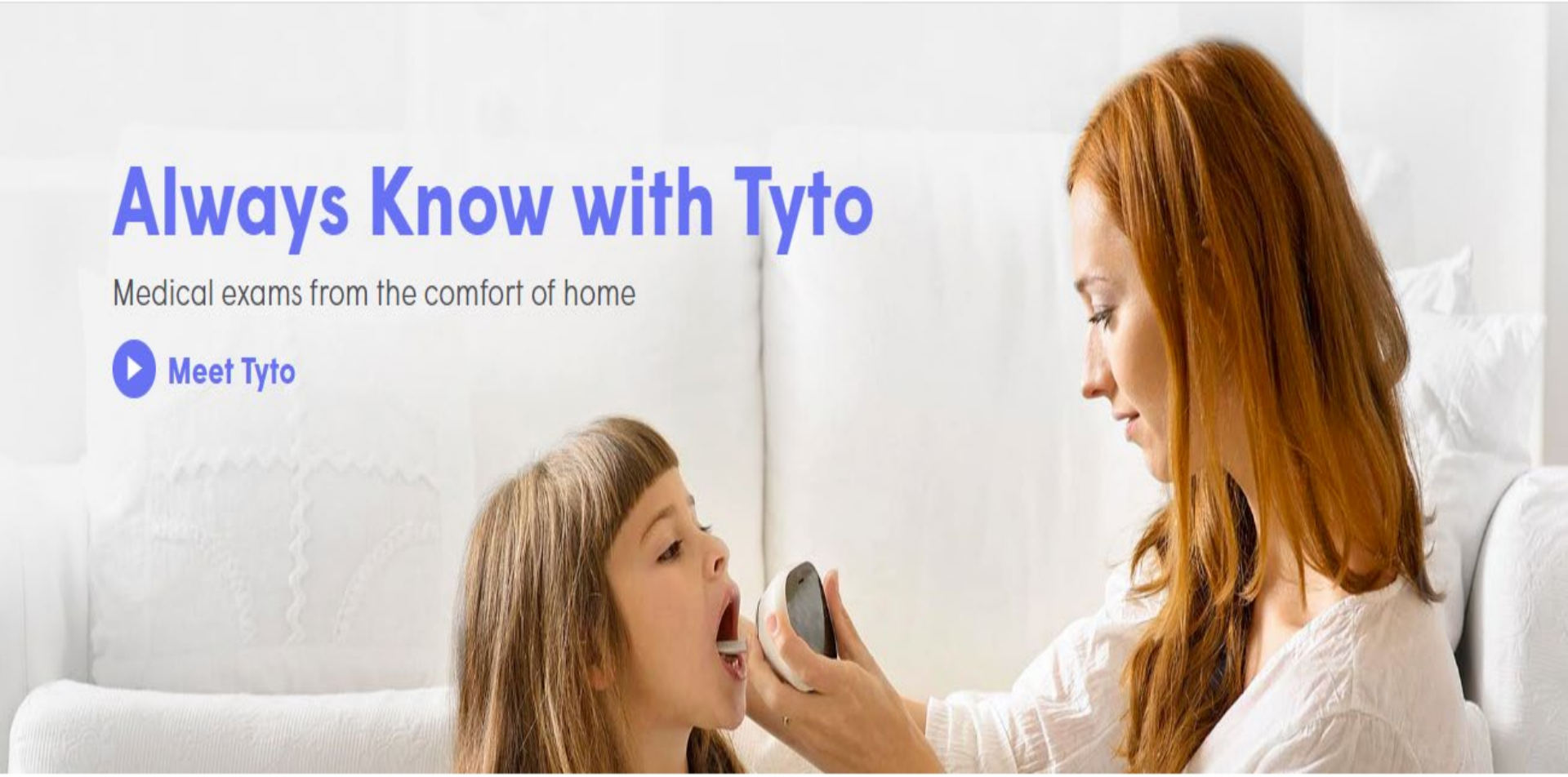

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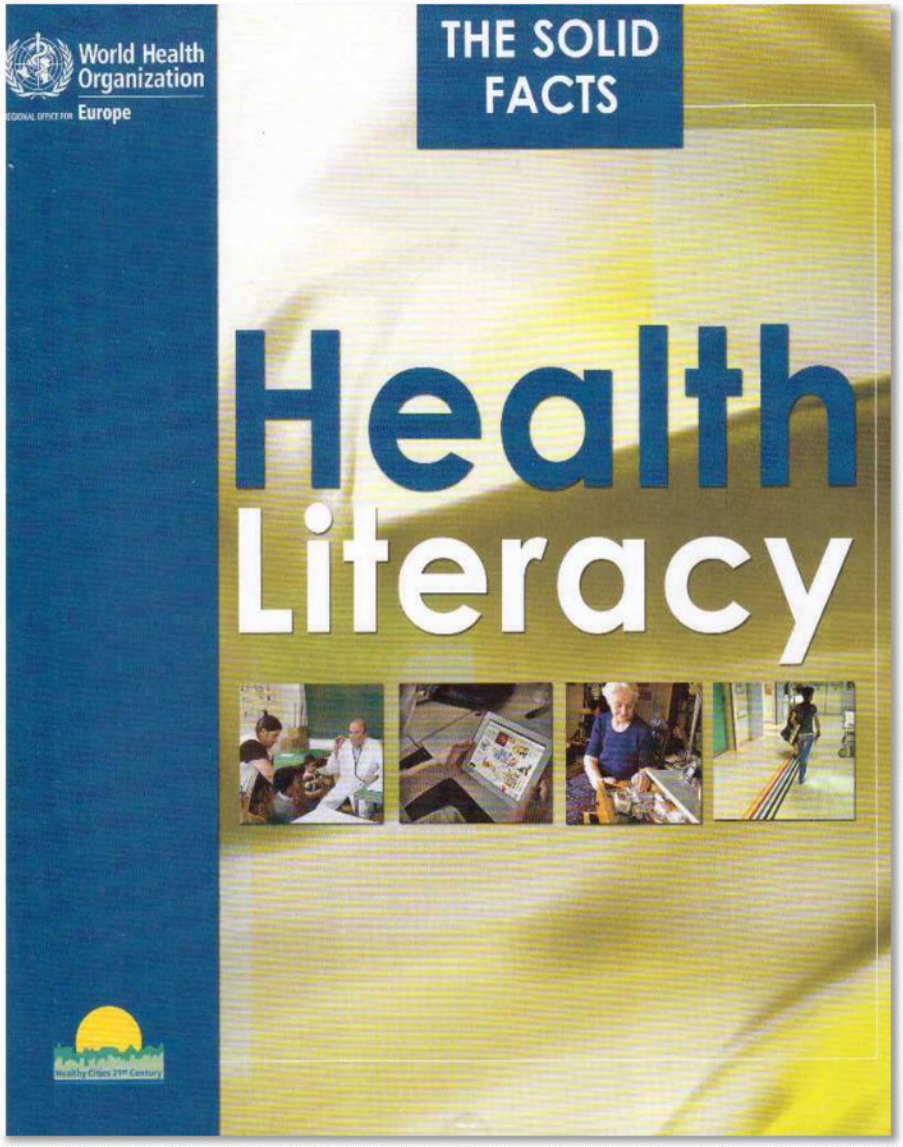
What's Included

New Frontiers and Future Directions


World Health Organization
REGIONAL OFFICE FOR Europe
THE SOLID FACTS
Health Literacy
Healthy Cities 21st Century

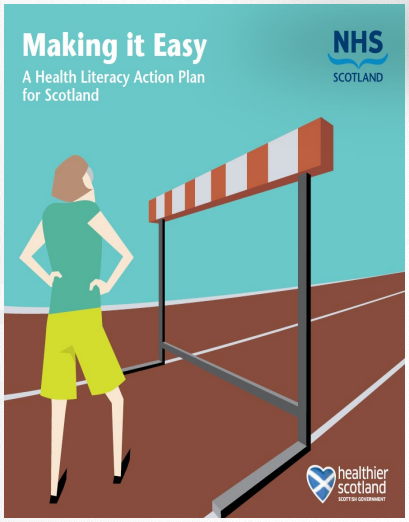
IUHPE Global Working Group on Health Literacy

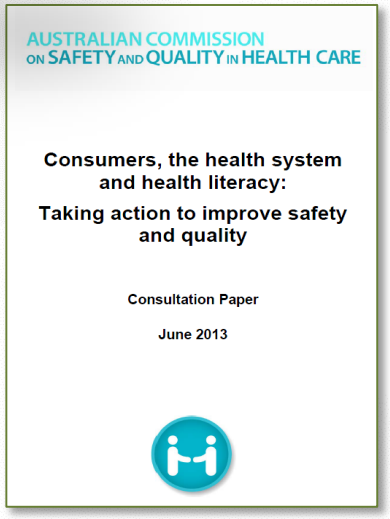
Position Statement on Health Literacy: A practical vision for a health literate world

Action Areas

IUHPE
INTERNATIONAL UNION FOR HEALTH PROMOTION AND EDUCATION

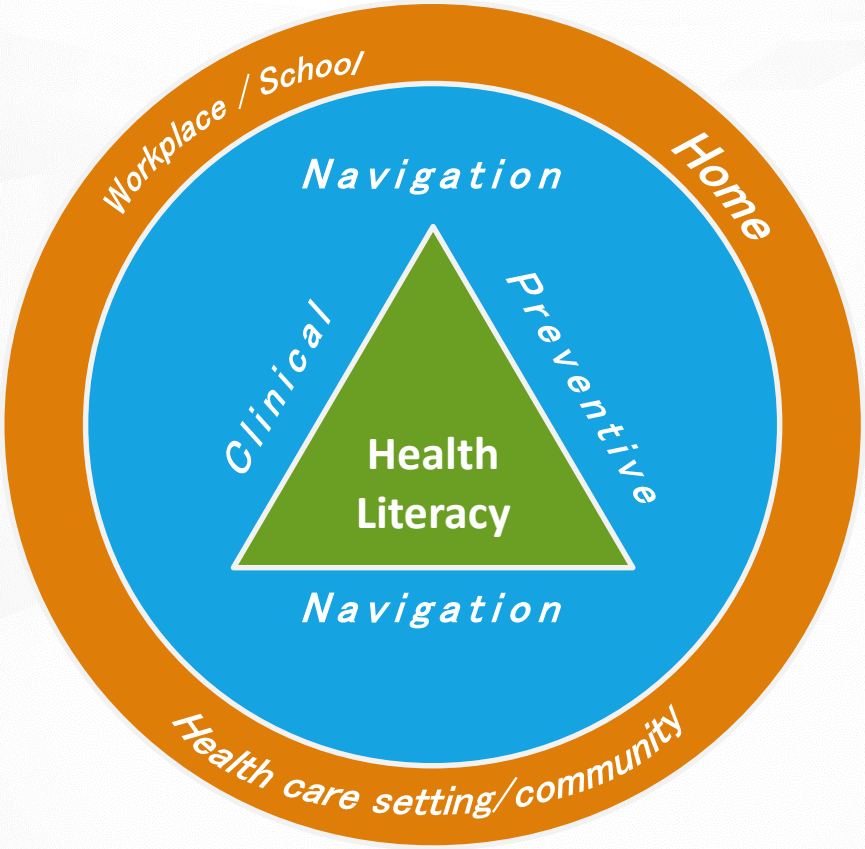
Selected Examples of Policy Initiatives for Promoting Health Literacy





Ultimate action..

Health Literacy in All Policies



Conclusions

- Leadership and responsibility of the health system are necessary for providing more health literacy resources and cultural appropriate services;
- Diversity of opportunities for promoting organizational health literacy, based on the settings approach to health promotion, to plan, implement and evaluate sustainable interventions for promoting health

Future needs for applied research in practice and intervention

- **Digital health literacy** - How can we promote DHL at the individual and community level, without leaving anyone behind?
- **Critical health literacy** – How can we best develop the “Prosumer” (as opposed to consumer) from an early age?
- **Digital Health Literacy across the lifespan (MPOHL)** - Initiate longitudinal cohort studies to understand if the challenges are generational or cohort

It is never too late….

Thank you!

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Global Health Literacy Summit October 2020
Kaishung Taiwan